ORDER NO. CPD0706228C1

Service Manual

Notebook Computer

Model No. **CF-52AJYZDZM**

TOUGHBOOK

This is the Service Manual for
the following areas.
M …for U.S.A. and Canada

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

WARNINGS

For U.K.

This apparatus must be earthed for your safety.

To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring.
Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.
The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe.
For your safety, if you have any doubt about the effective earthing of the power point, consult a qualified electrician.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 3 amp fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 3 amps and that it is approved by ASTA or BSI to BS 1362.

Check for the ASTA mark ◈ or the BSI mark ♡ on the body of the fuse.
If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.
If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

Warning: THIS APPLIANCE MUST BE EARTHED.

Important

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

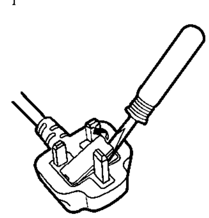
As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ coloured GREEN or GREEN-and-YELLOW.

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured RED.

The mains plug on this equipment must be used to disconnect the mains power.
Please ensure that a socket outlet is available near the equipment and shall be easily accessible.

■ How to replace the fuse

Open the fuse compartment with a screwdriver and replace the fuse.



Warnings

- This equipment is not designed for connection to an IT power system.
  (An IT system is a system having no direct connections between live parts and Earth; the exposed-conducive-parts of the electrical installation are earthed.
  An IT system is not permitted where the computer is directly connected to public supply systems in the U.K.)
- Disconnect the mains plug from the supply socket when the computer is not in use.

This equipment is produced to BS800/1983.

LASER SAFETY INFORMATION

For U.S.A.

Class 1 LASER-Product

This product is certified to comply with DHHS Rules 21 CFR Subchapter J.
This product complies with European Standard EN60825 (or IEC Publication 825)

For all areas
This equipment is classified as a class 1 level LASER product and there is no hazardous LASER radiation.

Caution:
(1) Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
(2) The drive is designed to be incorporated into a computer-based system or unit which has an enclosing cover. It should never be used as a stand alone drive.

Danger:
The serviceman should not remove the cover of drive unit and should not service because the drive unit is a non-serviceable part.
Please check DANGER label on PD-drive unit.

- Unplug the AC power cord to the equipment before opening the top cover of the drive.
- When the power switch it on, do not place your eyes close to the front panel door to look into the interior of the unit.

LASER Specification

Class 1 level LASER Product
Wave Length: DVD 658±8 nm
CD 775~815 nm

Laser safety information is appropriate only when drive with laser is installed.

Safety precautions

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacture's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.

Important Safety Instructions

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.

SAVE THESE INSTRUCTIONS

Lithium Battery

Lithium Battery!

This computer contains a lithium battery to enable the date, time, and other data to be stored. The battery should only be exchanged by authorized service personnel.

Warning! A risk of explosion from incorrect installation or misapplication may possibly occur.

LITHIUM BATTERY ⚠

- **CAUTION**

  Danger of explosion if battery is incorrectly replaced.
  Replace only with the same or equivalent type recommended by the equipment manufacture.
  Discard used batteries according to the manufacturer's instructions.

LITHIUMBATTERIES ⚠

Vorsicht!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Ersatz nur durch denselben order einen vom Hersteller empfohlenen ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

PILE AU LITHIUM ⚠

ATTENTION: IL Y A DANGER D'EXPLOSION S' IL Y A REMPLACEMENT INCORRECT DE LA PILE. REMPLACER UNIQUEMENT AVEC UNE PILE DU MÈME TYPE OU D'UN TYPE RECOMMANDÉ PAR LE CONSTRUCTEUR. METTRE AU RÉBUT LES PILES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT.

For U.S.A. / CANADA

A lithium ion battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

L'appareil que vous vous êtes procuré est alimenté par une batterie au lithium-ion. Pour des renseignements sur le recyclage de la batterie, veuillez composer le 1-800-8-BATTERY.

Precautions (Battery Pack)

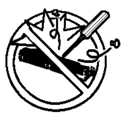
- Care should be exercised with regard to the following in order to avoid the possibility of overheating, fire or damage.



Avoid Heat
Do not throw the battery pack into a fire or expose it to excessive heat.



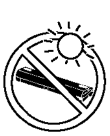
Keep Articles Away
Do not place the battery pack together with articles such as necklaces or hairpins when carrying or storing.



Do Not Disassemble
Do not insert sharp objects into the battery pack, expose it to bumps or shocks, deform, disassemble, or modify it.



Do Not Short
Do not short the positive (+) and negative (-) contacts.



Avoid Extreme Heat, Cold and Direct Sunlight
Do not charge, use or leave the battery pack for extended periods where it will be exposed to direct sunlight, in a hot place (in an automobile on a sunny day, for example), or in a cold place.



Do Not Use With Any Other Computer
The battery pack is rechargeable and was intended for the specified computer or charger. Do not use it with a computer other than the one for which it was designed.



Do Not Put into a Microwave
Do not put the battery pack into a microwave oven or a pressurized chamber.



Discontinue Use
Should the battery emit an abnormal odor, become hot to the touch, become discolored, change shape, or become in any way different from normal, remove it from the computer or charger and discontinue use.

- Do not touch the terminals on the battery pack. The battery pack may no longer function properly if the contacts are dirty or damaged.
- Do not expose the battery pack to water, or allow it to become wet.
- If the battery pack will not be used for a long period of time (a month or more), charge or discharge (use) the battery pack until the remaining battery level becomes 30% to 40% and store it in a cool, dry place.
- This computer prevents overcharging of the battery by recharging only when the remaining power is less than approx. 95% of capacity.
- The battery pack is not charged when the computer is first purchased. Be sure to charge it before using it for the first time. When the AC adaptor is connected to the computer, charging begins automatically.
- Should the battery leak and the fluid get into your eyes, do not rub your eyes. Immediately flush your eyes with clear water and see a doctor for medical treatment as soon as possible.

NOTE

- The battery pack may become warm during recharging or normal use. This is completely normal.
- Recharging will not commence outside of the allowable temperature range (0 °C to 50 °C {32°F to 122 °F}).(☞ Reference Manual "Battery Power") Once the allowable range requirement is satisfied, charging begins automatically. Note that the recharging time varies based on the usage conditions. (Recharging takes longer than usual when the temperature is 10 °C {50 °F} or less.)
- If the temperature is low, the operating time is shortened. Only use the computer within the allowable temperature range.
- The battery pack is a consumable item. If the amount of time the computer can be run off a particular battery pack becomes dramatically shorter and repeated rechargings do not restore its performance, the battery pack should be replaced with a new one.
- When transporting spare batteries inside a package, briefcase, etc., it is recommended that it be placed in a plastic bag so that its contacts are protected.
- Always power off the computer when it is not in use. Leaving the computer on when the AC adaptor is not connected will exhaust the remaining battery capacity.

CONTENTS

1. Specifications

This page provides the specifications for the basic model CF-52AJCBDBM / CF-52BJCBZBM / CF-52AJCHDBM / CF-52CCABXBM / CF-52DCABZBM. The model number is different according to the unit configuration.

To check the model number:
Check the bottom of the computer or the box the computer came in at the time of purchase.
To check CPU speed, memory size and the hard disk drive (HDD) size:
Run the Setup Utility and select [Information] menu.
[CPU Speed]: CPU speed, [System Memory]: Memory size, [Hard Disk]: Hard disk drive size

Main Specifications

Model No.		CF-52AJCBDBM / CF-52BJCBZBM / CF-52AJCHDBM	CF-52CCABXBM / CF-52DCABZBM
CPU		Intel® Core™ 2 Duo Processor T7300 (2.0 GHz, 4 MB[*1] L2 cache, 800 MHz FSB)	Intel® Core™ 2 Duo Processor T7100 (1.8 GHz, 2 MB[*1] L2 cache, 800 MHz FSB)
Chipset		Mobile Intel® PM965 Express Chipsets	Mobile Intel® GM965 Express Chipsets
Memory[*1*2]		1024 MB (4096 MB Max.)	
Video Memory[*1]		512 MB	UMA (384 MB Max.)[*3]
Hard Disk Drive[*4]		120 GB	80 GB
Display Method		15.4 WUXGA type (TFT)	15.4 WXGA type (TFT)
	Internal LCD[*5]	65,536/16,777,216 colors (800 × 600 dots/1024 × 768 dots/1280 × 768 dots/1600 × 1200 dots/1920 × 1080 dots/ 1920 × 1200 dots)	65,536/16,777,216 colors (800 × 600 dots/1024 × 768 dots/1280 × 768 dots/1280 × 800 dots)
	External Display[*6]	65,536/16,777,216 colors (800 × 600 dots/1024 × 768 dots/1280 × 768 dots/1280 × 1024 dots/ 1600 × 1200 dots/1920 × 1080 dots/1920 × 1200 dots/2048 × 1536 dots)	
LAN		IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T	
Modem		Data: 56 kbps (V.92) FAX: 14.4 kbps	
Sound		WAVE and MIDI playback, Stereo speaker, Intel® High Definition Audio subsystem support	
Security Chip		TPM (TCG V1.2 compliant)[*9]	
Card Slot	PC Card	Type I or Type II x 1 (3.3 V: 400 mA, 5 V: 400 mA)	
	ExpressCard	ExpressCard/34 or ExpressCard/54 x 1	
	SD Memory Card[*10]	x 1, Data transfer rate = 8 MB per second[*11]	
	Smart Card[*12]	x 1	
RAM Module Slot		200-pin, 1.8 V, SO-DIMM, DDR2 SDRAM, PC2-5300 Compliant	
Interface		USB port (4-pin, USB 2.0) x 4, Serial Port (Dsub 9-pin male), Modem port (RJ-11), LAN port (RJ-45), External display port (Mini Dsub 15-pin female), IEEE1394a Interface Connector (4-pin × 1), Microphone Jack (Miniature jack, 3.5 DIA, Stereo), Headphone Jack (Miniature jack, 3.5 DIA, Impedance 32 Ω, Output Power 4 mW × 2, Stereo)	
Keyboard / Pointing Device		87 keys / Touch Pad	
Power Supply		AC adaptor or Battery pack	
AC Adaptor[*13]		Input: 100 V to 240 V AC, 50 Hz/60 Hz, Output: 15.6 V DC, 8.0 A	

Main Specifications

Model No.	CF-52AJCBDBM / CF-52BJCBZBM / CF-52AJCHDBM	CF-52CCABXBM / CF-52DCABZBM
Battery Pack	Li-ion 11.1 V, 7.65 Ah	
Operating Time[*14]	Approx. 3.5 hours to 4.5 hours[*15] (Approx. 4.5 hours[*16])	Approx. 6.0 hours to 9.5 hours[*15] (Approx. 7.5 hours[*16])
Charging Time[*14]	Approx. 4 hours	
Clock Battery	Coin type lithium battery 3.0 V	
Power Consumption[*17]	Approx. 60 W[*18]/ Approx. 100 W (Maximum when recharging in the ON state)	Approx. 45 W[*18]/ Approx. 100 W (Maximum when recharging in the ON state)
Physical Dimensions (W × H × D) (including the carrying handle)	355.7 mm × 50.7 - 51.9 mm × 286.8 mm {14.0" × 2.0 " × 11.3"}	
Weight (including the carrying handle)	Approx. 3.35 kg {Approx. 7.4 lb.}	Approx. 3.3 kg {Approx. 7.3 lb.}
Operation Environment	Temperature: 5 °C to 35 °C {41 °F to 95 °F} Humidity: 30% to 80% RH (No condensation)	
Storage Environment	Temperature: -20 °C to 60 °C {-4 °F to 140 °F} Humidity: 30% to 90% RH (No condensation)	
Operating System	Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies (NTFS File System)	
Utility Programs	DMI Viewer, Adobe Reader, PC Information Viewer, SD Utility, Icon Enlarger, Loupe Utility, WinDVD™ 5 (OEM Version), B's Recorder GOLD8 BASIC, B's CLiP 6, Intel® PROSet/Wireless Software[*7], Bluetooth™ Stack for Windows® by TOSHIBA[*8], Wireless Switch Utility, Hotkey Settings, Battery Recalibration Utility, Infineon TPM Professional Package[*19], Recover Pro™ 6[*19]	
	Setup Utility, Hard Disk Data Erase Utility[*20]	

CD/DVD Drive

CD/DVD Drive		DVD MULTI Drive
Data Transfer Rate[*21]	Reading[*22]	DVD-ROM: 8X (Max.), CD-ROM: 24X (Max.)
	Writing[*23]	CD-R: 4X/10X/10-16X/10-20X/10-24X CD-RW: 4X High-Speed CD-RW: 4X/10X Ultra-Speed CD-RW: 10X/10-16X/10-20X/10-24X DVD-R: 1X/2X/2-4X/2-6X/2-8X DVD-RW: 1X/2X/2-4X/2-6X DVD-RAM: 2X/3X/3-5X +R: 2.4X/2.4-4X/2.4-6X/2.4-8X +R DL: 2.4X/2.4-4X +RW: 2.4X/2.4-4X High-Speed +RW: 3.3X/3.3-6X/3.3-8X
Supported Discs/ Format[*4]	Reading	DVD-ROM (4.7 GB, 8.5 GB, 9.4 GB, 17 GB), DVD-Video, DVD-R (1.4 GB, 3.95 GB, 4.7 GB), DVD-R DL (8.5 GB), DVD-RW[*24] (1.4 GB, 2.8 GB, 4.7 GB, 9.4 GB), DVD-RAM[*25] (1.4 GB, 2.8 GB, 4.7 GB, 9.4 GB), +R (4.7 GB), +R DL (8.5 GB), +RW (4.7 GB), CD-Audio, CD-ROM, CD-R, Photo CD, Video CD, CD-RW, CD TEXT, CD-EXTRA
	Writing	DVD-R (1.4 GB, 4.7 GB for General), DVD-R DL (8.5 GB), DVD-RW[*24] (1.4 GB, 2.8 GB, 4.7 GB, 9.4 GB), DVD-RAM[*25] (1.4 GB, 2.8 GB, 4.7 GB, 9.4 GB), +R (4.7 GB), +R DL (8.5 GB), +RW (4.7 GB), CD-R, CD-RW

Wireless LAN <Only for model with wireless LAN>

Intel® Wireless WiFi link 4965 AGN (802.11 a + b + g)*26	
Data Transfer Rates*27	IEEE802.11a: 54/48/36/24/18/12/9/6 Mbps (automatically switched) IEEE802.11b: 11/5.5/2/1 Mbps (automatically switched) IEEE802.11g: 54/48/36/24/18/12/9/6 Mbps (automatically switched)
Standards Supported	IEEE802.11a/IEEE802.11b/IEEE802.11g
Transmission method	OFDM system, DSSS system
Wireless Channels Used	IEEE802.11a: Channels 36/40/44/48/52/56/60/64/149/153/157/161/165 IEEE802.11b/IEEE802.11g: Channels 1 to 11
RF Frequency Band	IEEE802.11a: 5.18-5.32 GHz, 5.745-5.825 GHz IEEE802.11b/IEEE802.11g: 2.412-2.462 GHz

Bluetooth™ <Only for model with Bluetooth>

Bluetooth Version	2.0 + EDR
Transmission method	FHSS system
Wireless Channels Used	Channels 1 to 79
RF Frequency Band	2.402-2.48 GHz

*1 1MB = 1,048,576 bytes

*2 You can physically expand the memory up to 4096 MB, but the total amount of usable memory available will be less depending on the actual system configuration.

*3 A segment of the main memory is allotted automatically depending on the computer's operating status. The size of the Video Memory cannot be set by the user.

*4 1GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB.

*5 A 16,777,216 color display is achieved by using the dithering function.

*6 Maximum resolution depends on the specifications of the external display.

*9 For information on TPM, click [start] - [Run] and input "c:\util\drivers\tpm\README.pdf", and refer to the Installation Manual of "Trusted Platform Module (TPM)".

*10 Operation has been tested and confirmed using Panasonic SD Memory Cards with a capacity of up to 2 GB.
Operation on other SD equipment is not guaranteed.
This computer is not compatible with MultiMediaCards or SDHC Memory Cards. Do not insert these kinds of cards.

*11 Theoretical value and not the actual speed. The transfer rate does not become higher even if you use a card that supports the higher transfer rate.

*12 Only for model with Smart Card slot

*13 <Only for North America>
The AC adaptor is compatible with power sources up to 240 V AC adaptor. The computer is supplied with a 125 V AC compatible AC cord. 20-M-2-1

*14 Varies depending on the usage conditions.

*15 Measured using BatteryMark™ Version 4.0.1 (LCD brightness: Maximum - Minimum)

*16 Measured using MobileMark™ 2005 (LCD brightness: 60 cd/m^2)

*17 Approx. 0.9 W when the battery pack is fully charged (or not being charged) and the computer is OFF.
Approx. 1.5 W when the Wake up from LAN has been enabled.

*18 Rated power consumption 23-E-1

*19 You need to install to use the feature.

*20 The Product Recovery DVD-ROM is required.

*21 The data transfer rate of DVD per 1X speed is 1,350 KB/s.
The data transfer rate of CD per 1X speed is 150 KB/s.

*22 If an unbalanced disc (e.g., the balance has been displaced from the center) is inserted, the speed may become slower if there are large vibrations while the disc is rotating.

*23 Depending on the disc, the writing speed may become slower.

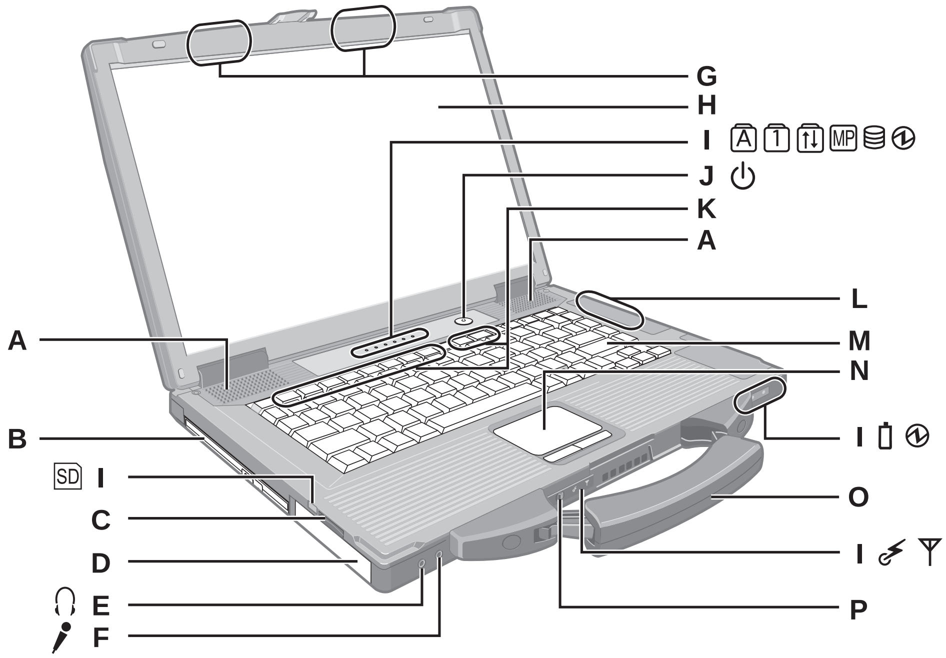
*24 Does not support DVD-RW Ver.1.0.

*25 DVD-RAM: Only non-cartridge type or removable cartridge type can be used.

*26 It does not correspond to IEEE802.11n.

*27 These are speeds specified in IEEE802.11a+b+g standards. Actual speeds may differ.

2. Names and Functions of Parts



A : Speaker

B : Multimedia pocket

C : SD Memory Card slot

D : Battery pack

E : Headphone jack

You can connect headphones or amplified speakers. When they are connected, audio from the internal speakers is not heard.

F : Microphone jack

A condenser microphone can be used. If other types of microphones are used, audio input may not be possible, or malfunctions may occur as a result.

- When recording in stereo using a stereo microphone: Click [start] - [All Programs] - [SoundMAX] - [Control Panel] and select [Microphone], and then add a check mark for [No Filtering] in [Microphone Enhancements].
- When using a monaural microphone with a 2-terminal plug: Click [start] - [All Programs] - [SoundMAX] - [Control Panel] and select [Microphone], and then add a check mark for [Voice Recording] in [Microphone Enhancements]. Otherwise, only audio on the left track will be recorded.

G : Wireless LAN antenna

<Only for model with wireless LAN>

H : LCD

I : LED indicator

A Caps lock

1 Numeric key (NumLk)

Scroll lock (ScrLk)

MP Multimedia pocket device status

Hard disk drive status

Power status

(Off: Power off/Hibernation, Green: Power on, Blinking green: Standby, Blinking green rapidly: Cannot power on or resume due to low temperature.)

Battery status

SD SD Memory Card status

(Blinking: During access or a password is requested)

Wireless ready

This indicator lights when Wireless LAN, Bluetooth, and/or Wireless WAN are connected and ready. It does not necessarily indicate the On/Off condition of the wireless connection.

Wireless WAN status

<Only for model with wireless WAN>

Refer to the instruction manual of the wireless device

J : Power switch

K : Function key

L : Bluetooth antenna

<Only for model with Bluetooth>

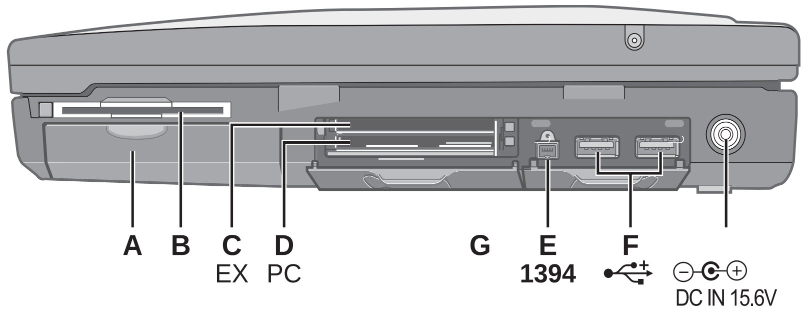
M : Keyboard

N : Touch pad

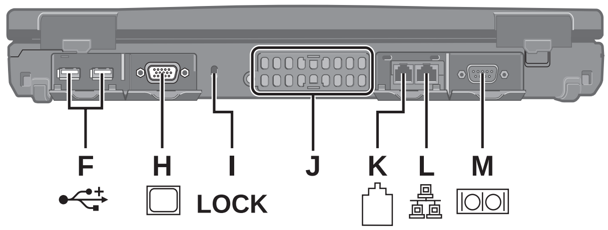
O : Carrying handle

P : Wireless switch

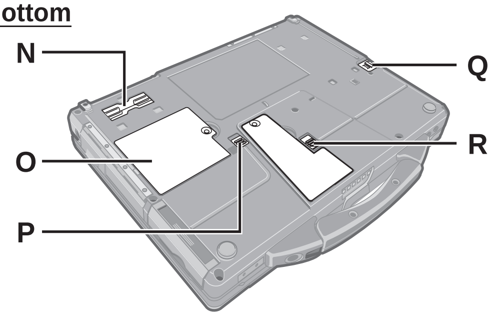
Right side



Rear side



Bottom



A : Hard disk drive

B : Smart Card slot
<Only for model with Smart Card slot>

C : ExpressCard slot

D :PC Card slot

E : IEEE 1394 interface connector

F : USB port

G : DC-IN jack

H : External display port

I : Security lock
A Kensington cable can be connected.
For further information, read the manual that comes with the cable.

J : Ventilation hole

K : Modem port

L : LAN port

M : Serial port

N : Expansion bus connector

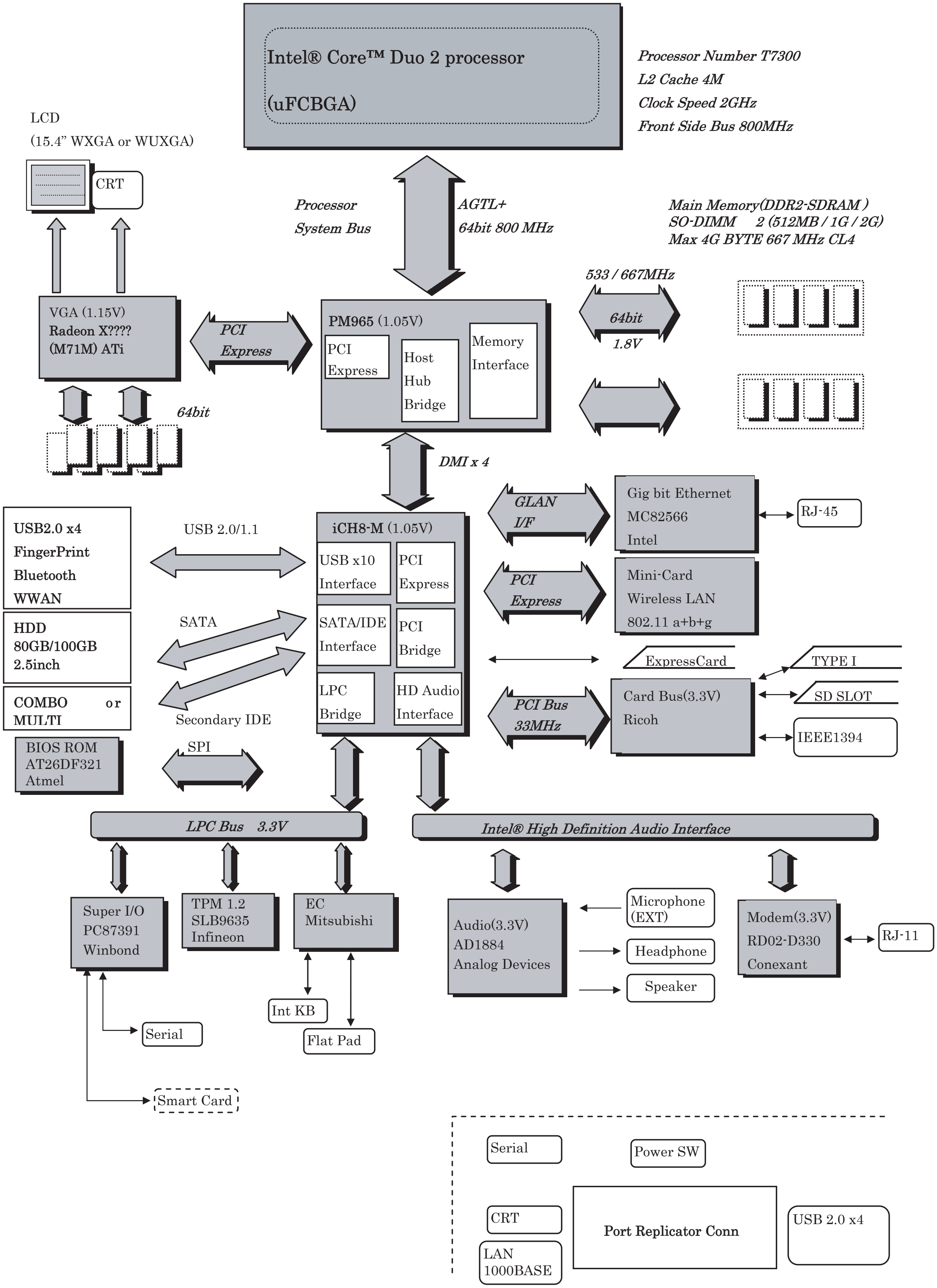
O : RAM module slot

P : Hard disk drive latch

Q : Multimedia pocket release button

R : Battery latch

3 Block Diagram

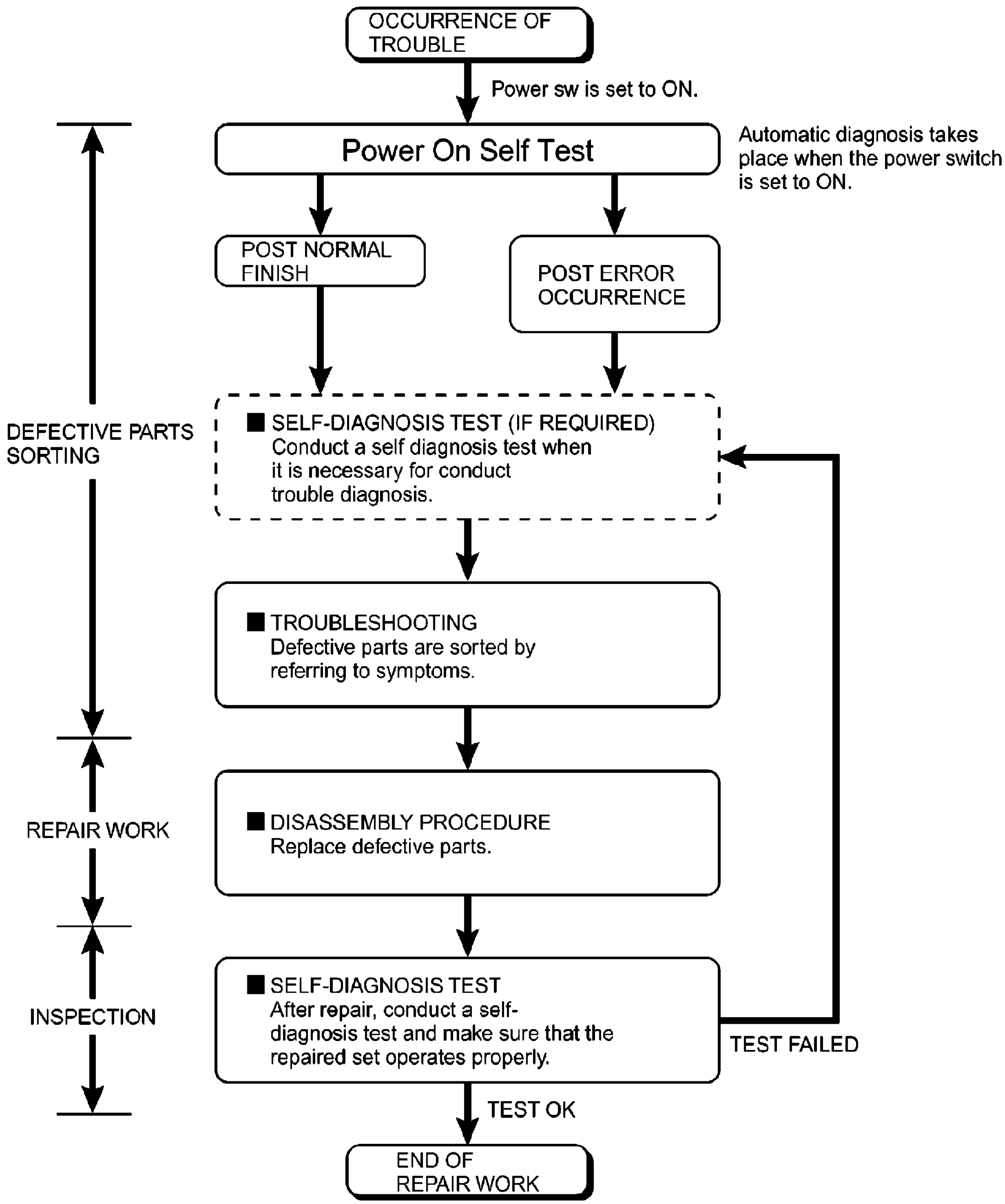


4 Diagnosis Procedure

4.1. Basic Procedures

The basic procedures for diagnosis, disassembly, and test of defective parts of a set to be repaired are summarized below. For details, refer to relevant pages in the Service Manual.

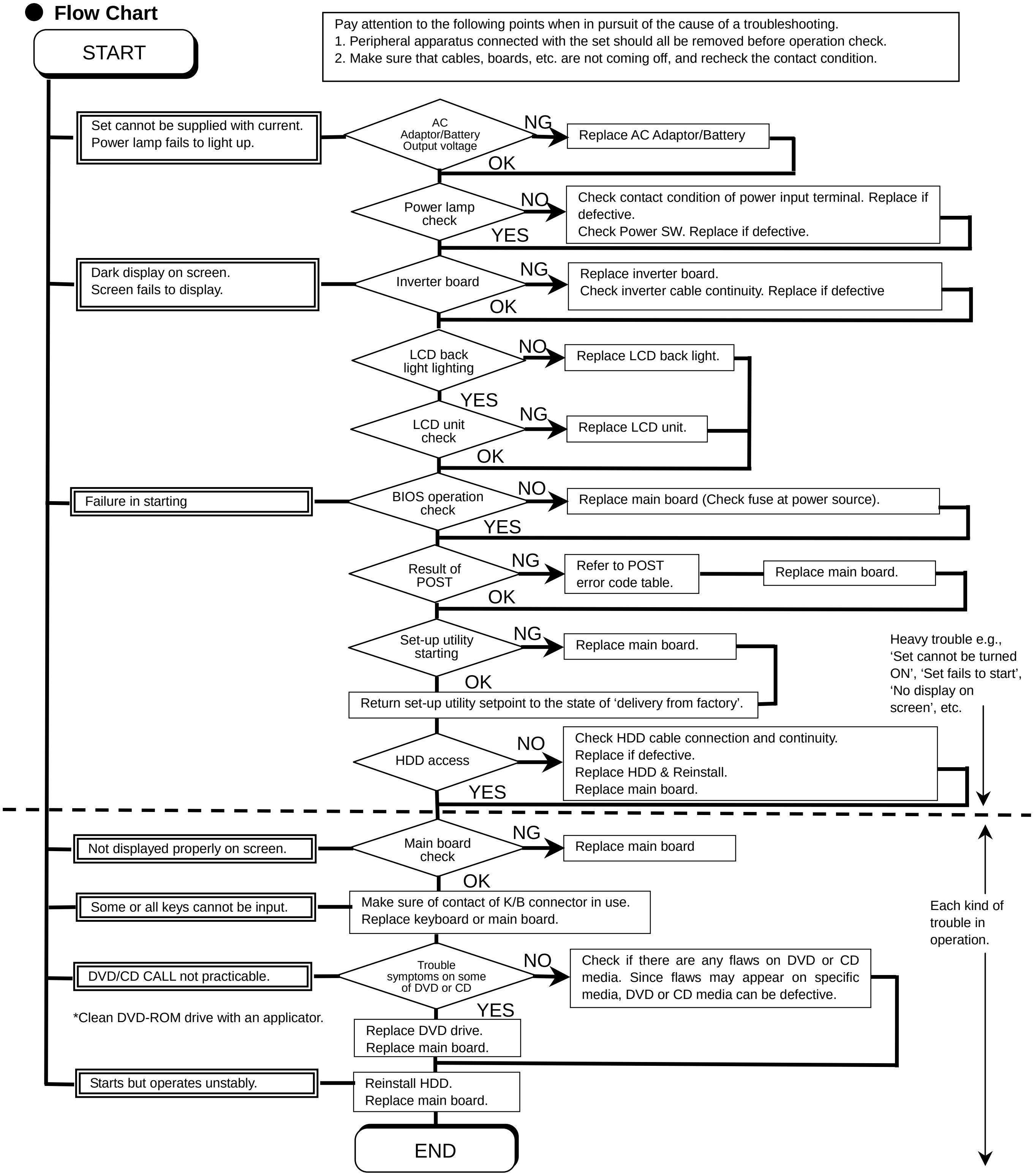
- **Flow Chart**



4.2. Troubleshooting

Please take note of the following two points with regard to troubleshooting:
1. Know-how of diagnosis upon occurrence of heavy troubles, e.g. 'Set cannot be turned ON', 'Set fails to start', 'No display on screen', etc.
2. Explanation of each trouble, mainly symptom of trouble in operation.

● Flow Chart



5 Power-On Self Test (Boot Check)

Outline of POST

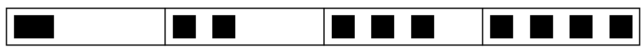
The set has a boot check function called POST (Power-On Self Test) in it. The condition of the main body is diagnosed by checking beep sound or error code.

- Start ....Test begins automatically when power switch is set to ON.
- Normal finish .....After memory checking, a beep sound is issued once and the set is placed into automatic stop.

Note: If no error occurs, nothing is displayed. (No display of OK, etc.)

Error Diagnosis by Checking Beep Signal Sound

The beep sound is as follows:


(1 (long sound) -2-3-4)

(Length of bar shows length of sound.)

■■ = long sound (about 0.4 sec.), ■ = short sound (about 0.2 sec.), Length between sounds is about 0.1 sec.

- **Table of errors classified by beep sounds**

Diagnosis	Beep signal sound	Error message
Main board	1(long sound)-2	BIOS ROM error
	1-2-2-3	BIOS ROM error
	1-3-1-1	RAM error
	1-3-1-3	Keyboard controller error
	1-3-4-1	RAM error
	1-3-4-3	RAM error
	1-4-1-1	RAM error
	2-1-2-3	BIOS ROM error
	2-2-3-1	Occurrence of unexpected offering

(Note) A beep sound is also issued in case of other I/O trouble.

6 List of Error Codes <Only when the port replicator is connected>

The following is a list of the messages that BIOS can display. Most of them occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured. Following the list are explanations of the messages and remedies for reported problems.
If your system displays one of except the messages marked below with an asterisk (*), write down the message and contact Panasonic Technical Support. If your system fails after you make changes in the Setup menus, reset the computer, enter Setup and install Setup defaults or correct the error.

0200 Failure Fixed Disk
Fixed disk in not working or not configured properly. Check to see if fixed disk is attached properly. Run Setup. Find out if the fixed-disk type is correctly identified.

0210 Stuck key
Stuck key on keyboard.

0211 Keyboard error
Keyboard not working.

0212 Keyboard Controller Failed
Keyboard controller failed test. May require replacing keyboard controller.

0213 Keyboard locked - Unlock key switch
Unlock the system to proceed.

0230 System RAM Failed at offset : *nnnn*
System RAM failed at offset *nnnn* of in the 64k block at which the error was detected.

0231 Shadow RAM Failed at offset : *nnnn*
Shadow RAM failed at offset *nnnn* of the 64k block at which the error was detected.

0232 Extended RAM Failed at offset : *nnnn*
Extended memory not working or not configured properly at offset *nnnn*.

0250 System battery is dead - Replace and run SETUP
The CMOS clock battery indicator shows the battery is dead. Replace the battery and run Setup to reconfigure the system.

***0251 System CMOS checksum bad - Default configuration used**
System CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. The BIOS installed Default SETUP Values. If you do not want these values, enter Setup and enter your own values. If the error persists, check the system battery or contact Panasonic Technical Support.

0260 System timer error
The timer test failed. Requires repair of system board.

0270 Real time clock error
Real-time clock fails BIOS test. May require board repair.

***0280 Previous boot incomplete - Default configuration used**
Previous POST did not complete successfully. POST loads default values and offers to run Setup. If the failure was caused by incorrect values and they are not corrected, the next boot will likely fail. On systems with control of **wait states**, improper Setup settings can also terminate POST and cause this error on the next boot. Run Setup and verify that the wait-state configuration is correct. This error is cleared the next time the system is booted.

0281 Memory Size found by POST differed from EISA CMOS
Memory size found by POST differed from EISA CMOS.

02D0 System cache error - Cache disabled

Contact Panasonic Technical Support.

02F0: CPU ID:

CPU socket number for Multi-Processor error.

02F4: EISA CMOS not writable

ServerBIOS2 test error: Cannot write to EISA CMOS.

02F5: DMA Test Failed

ServerBIOS2 test error: Cannot write to extended DMA (Direct Memory Access) registers.

02F6: Software NMI Failed

ServerBIOS2 test error: Cannot generate software NMI (Non-Maskable Interrupt).

02F7: Fail - Safe Timer NMI Failed

ServerBIOS2 test error: Fail-Safe Timer takes too long.

***device* address Conflict**

Address conflict for specified *device*.

Allocation Error for: *device*

Run ISA or EISA Configuration Utility to resolve resource conflict for the specified *device*.

Failing Bits : *nnnn*

The hex number *nnnn* is a map of the bits at the RAM address which failed the memory test. Each 1 (one) in the map indicates a failed bit. See error 230,231 or 232 for offset address of the failure in System, Extended or Shadow memory.

Invalid System Configuration Data

Problem with NVRAM (CMOS) data.

I/O device IRQ conflict

I/O device IRQ conflict error.

Operating System not found

Operating system cannot be located on either drive A: or drive C:. Enter Setup and see if fixed disk and drive A: are properly identified.

Parity Check 1 *nnnn*

Parity error found in the system bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????. Parity is a method for checking errors in binary data. A parity error indicates that some data has been corrupted.

Parity Check 2 *nnnn*

Parity error found in the I/O bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????.

Press <F1> to resume, <F2> to Setup

Displayed after any recoverable error message. Press <F1> to start the boot process or <F2> to enter a Setup and change the settings. Write down and follow the information shown on the screen.

7 Self Diagnosis Test

As for the self-diagnosis test(PC-Diagnostic utility) to use this model, a standard test and the enhancing test by the module of the main body building in are possible.

●Notes To skip BIOS password

Use <Ctrl>+<F10> key to skip BIOS password or authentication of fingerprint.
This key is only for entering DIAG mode. Not available to boot the computer.
If customer set "HDD Lock", the DIAG program cannot perform HDD test.
*This key is for service purpose only. Do not disclose this information to unrelated others.

1. Beginning of self-diagnosis test

1-1. Setting of content of setup

1. The power supply of the computer is turned on.
2. " F2 " is pushed on the screen of "Panasonic" while " press <F2 to enter Setup> " is displayed.
3. The setup utility starts and then takes notes of the content of the BIOS setup of present set.
4. " F9 " is pushed, " Yes" is selected on the screen of " Is the default value loaded? ", and " Enter" is pushed.
5. " F10 " is pushed.
6. " Yes" is selected on the screen of the setup confirmation, and " Enter" is pushed.
7. The computer starts automatically.

Attention

・If the device which can be set is set to "Invalidity" by "Advanced" or "Security" menu, becomes an error by "PC-Diagnostic utility".
(It is judged that the device which can be set to "Invalidity" by "Main" menu such as "Flat pad" is normal if the controller operates normally though sets to "Invalidity" by the setup.)

・In the model with built-in DVD of the USB connection, even if DVD is normal, becomes an error if legacy USB is set to "Invalidity"

1-2. When you execute an automatic test

1. "Ctrl" + "F7" is pushed while the "Panasonic" start screen is displayed after the computer is started.
2. The test of all devices begins automatically by "PC-Diagnostic utility" 's starting.

Attention

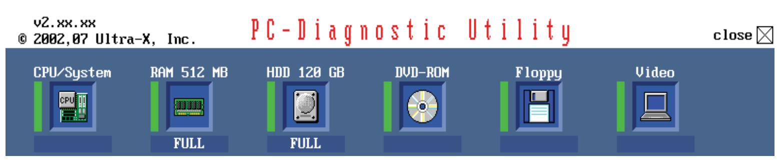
・It is a test which the customer who bought PC can execute. (As for HDD, the enhancing test is also possible.)

・A flat pad does not work for a while after starting "PC-Diagnostic utility".

・The movement of a flat pad might become abnormal If after RAM begins from the CPU/System test, a flat pad will be operated in about 30 seconds. In that case,restarts pushing"Alt" + "Ctrl" + "Del" key. Or, please start "PC-Diagnostic utility" again after doing the power supply switch in the slide, and turning off the power supply.

1-3. When you execute the enhancing test

1. Please let me discontinue diagnosing clicking  to end an automatic test.
2. Please click on the character of "D" "PC-Diagnostic utility" on the screen while pushing both of right "Shift" and left "Shift" keys.



3. All devices which can select the enhancing test make the setting of the enhancing test possible.
4. The district device is made"FULL" display (enhancing test).
5. The test begins clicking  .

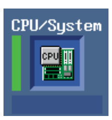
*Please refer to item 4 for the error result of each test and the division of the breakdown part.

2. Operation of PC-Diagnostic Utility

-Only the device which can be inspected on the entire screen is displayed.
-The item does not appear when the device of wireless LAN etc. is not physically connected.
-The movement of the item must use an arrow key or a flat pad.



-As for the device under the diagnosis, blue and yellow are alternately displayed at the left of the icon.
- The diagnosis result of the device greens at the left of the icon when it is normal, and becomes red when abnormal.



-When the test of all devices ends, the test result is displayed under the right of the screen.



-Please click  while diagnosing when being stop on the way by the time the test of all devices ends.
-Please click  when you restart "PC-Diagnostic utility".
*Each device is tested from the beginning, and it is not possible to restart on the way.
-When the test of all devices ends, the test result is displayed under the right of the screen.

2-1. Selection of tested device

-To test only a specific device, "Test" and "Do not test" of each device can be selected.
-The device which can select the enhancing test changes in order of "The standard is tested" and "Do not test" whenever the device icon is clicked.



Start the standard test



Do not test

Please begin testing clicking if the selection of the tested device ends.

2-2. "PC-Diagnostic utility" End method

When ☒ of "Close" on the right of the screen is clicked, the computer reactivates automatically. Or, the power supply switch is done in the slide and the power supply is turned off.

2-3. The content of the setup is returned to the setting of the user

1. Turned on the computer.
2. "F2" is pushed on the screen while "Press<F2>to enter Setup" is displayed of "Panasonic".
3. Push "F10", and on the screen of "Is the change in the setting preserved and do end?"and then "Yes" is selected, and "Enter" is pushed.
4. The computer reactivates automatically.
5. The end option is chosen by the start menu, and the power supply of the computer is turned off.

Standard at test time
All devices other than RAM and HDD ---------- about 1 minute
RAM standard test ----------------------------------- 1 - 2 minutes
HDD standard test ----------------------------------- 2 - 3 minutes
HDD enhancing test (60GB) ---------------------- about 40 minutes

Ex.The standard when the standard <all device> is tested becomes 1+2+3=6 minutes.

- There is greatly a difference from RAM test when the memory is increased according to the performance of the memory occasionally.
- Moreover, when the main body of PC under the test is a high temperature, it occasionally takes time.
- There is greatly a difference from HDD according to the performance of the drive occasionally.

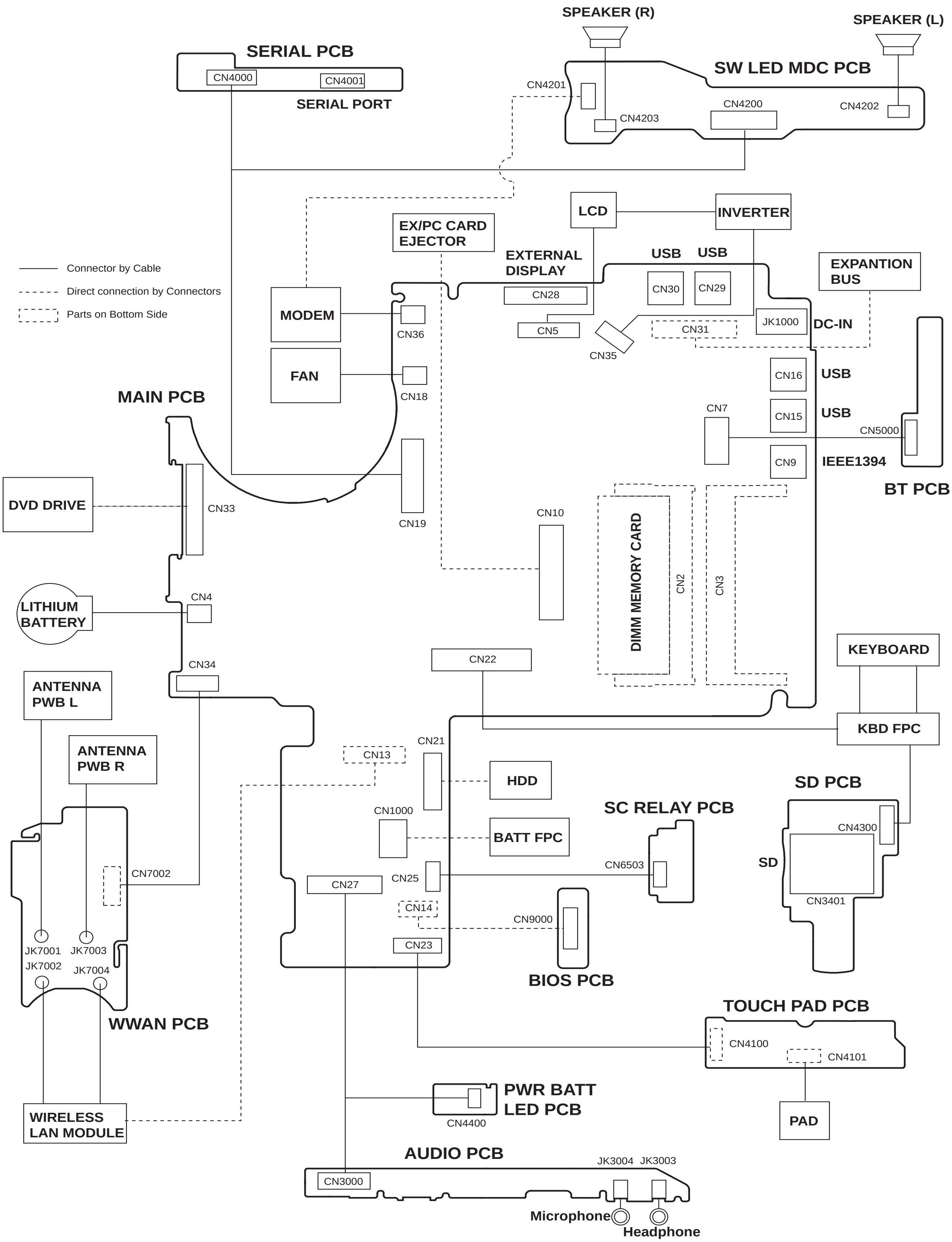
3. Test Item and Division of trouble

Test item	Stanard	Enhancing	Content of standard test	Content of enhancing test	Place with possibility of breakdown
CPU / SYSTEM	○	—	CPU is shifted to protected mode, and "Violation of the paging", "Operation of the violation of a privileged instruction", and DMA, INT, TIMER, and the RTC operation are confirmed.	—	CPU / Main board
RAM	○	—	All memory space is tested in a special memory access pattern based on "R.S.T . technology".	—	Memory / Mainboard
HDD	○	○	The record area frequently accessed with Microsoft Windows XP to test in about two minutes regardless of points of HDD is emphatically tested.	All record area is tested.	HDD / Mainboard / Cable / Connector
MODEM	○	—	It is confirmed not to find abnormality in the AC97 modem controller.	—	MODEM/ Mainboard
Wireless LAN	○	—	It is confirmed not to find abnormality in the Wireless LAN modem controller.	—	Wireless LAN board / Connector / Mainboard
Sound *5	○	—			
USB	○	○ *1	It is confirmed not to find abnormality in the USB controller.	It is confirmed not to find abnormalityin the wiring between the USB controller and the connector by confirming the connection of the USB equipment connected with the USB connector.	Mainboard / Connector
LAN	○	○ *2	It is confirmed not to find abnormality in the LAN controller.	It is confirmed not to find abnormalityin the wiring between the controller and the connector by connecting to HUB with LAN cable.	Mainboard / Connector
PC Card	○	—	It is confirmed not to find abnormality in the CardBus controller.	—	Mainboard
SD	○	—	It is confirmed not to find abnormality in the SD controller.	—	Mainboard
Keyboard	○	○ *3	It is confirmed not to find abnormality in keyboard controller's keyboard interface.	The key is actually input, and the operation is displayed on the screen.	Mainboard / Keyboard
Touch Pad	○	○ *4	Whether keyboard controller's mouse interface operates normally is confirmed.	The operation is actually displayed on the screen by operating the touch pad.	Mainboard / Touch Pad
DVD-ROM	○	○ *6	The drive is normally reset, and it is accessible is confirmed.	It is confirmed to be able to read media normally.	Mainboard / DVD Drive / DVD Cable / DVD Connector

Test Item	Standard	Enhanced	Content of Standard Test	Content of Extend Test	The place with possibility of breakdown
Touch Screen	○	○	It is confirmed not to find abnormality in the USB connection of Touch Screen. This test cannot find abnormality of Touch Screen.	Perform Touch Screen functionality practically. Operator has to judge PASS/FAIL with test result.	Main board/ Touch Screen
Bluetooth	○		It is confirmed not to find abnormality in the connection of Main board and Bluetooth module.	—	Bluetooth cable
Wireless WAN	○	—	It is confirmed not to find abnormality in the connection of Main board and Wireless WAN module.	—	WWAN cable
Floppy	○	—	It is confirmed not to find abnormality in the legacy FD drive. This test cannot find abnormality of mechanical breakdown. (e.g.. Head, Motor)	—	FD Drive/ Main board (Super I/O)/ FDD cable FDD connector
Video	○	—	It is confirmed not to find abnormality in access to VRAM with VESA. The PC which uses main memory as VRAM may fail with main memory failure.	—	Main board (Chipset, Graphic Controller)/ Memory
GPS	○	—	It is confirmed not to find abnormality in the connection of Main board and GPS	—	GPS cable
IEEE1394	○	—	It is confirmed not to find abnormality in the IEEE1394 controller.	—	Main board (IEEE#394 Controller)
Express Card	—	○	—	It is confirmed not to find abnormality in the wiring between Chipset and Express Card.	Main board (Chipset)/ Express Card Connector
Smart Card	○	—	It is confirmed not to find abnormality in the Smart Card controller.	—	Main board (Smart Card Controller)
Serial Port	○	○ *7	It is confirmed not to find abnormality of Super I/O UART function. This test cannot find lack of wiring between Super I/O and Serial Connector.	It is confirmed not to find abnormality in the wiring between Super I/O and Serial Connector. This test cannot find failure of cable characteristic and device problems.	Main board (Super I/O)/ Serial Connector
Parallel Port	○	○ *8	It is confirmed not to find abnormality of Super I/O parallel function. This test cannot find lack of wiring between Super I/O and Parallel Connector.	It is confirmed not to find abnormality in the wiring between Super I/O and Parallel Connector. This test cannot find failure of cable characteristic and device problems.	Main board (Super I/O)/ Parallel Connector

*1 Please connect the USB device with the port (USB connector) which wants to test before the tests.
*2 Please connect LAN port with LAN HUB with LAN cable before the tests.
*3 The operator actually inputs the key, and the operator judges PASS/FAIL of the test.
*4 The operator actually operates the mouse, and the operator judges PASS/FAIL of the test.
*5 It is not abnormal though the sound is emitted from the speaker while testing.
※ When the test result is PASS, trouble is thought by not hearing of the sound under the test from the speaker and the headphone by the wiring of the audio output system.
*6 Please set DVD/CD media in the drive before the tests.
*7 Please set a Special Loop Back Connector Tool at serial connector for Enhanced Test.
(This Connector Tool is same as the one used before.)
*8 Please set a Special Loop Back Connector Tool at parallel connector for Enhanced Test.
(This Connector Tools is same as the one used before.)

8 Wiring Connection Diagram



9 Disassembly/Reassembly

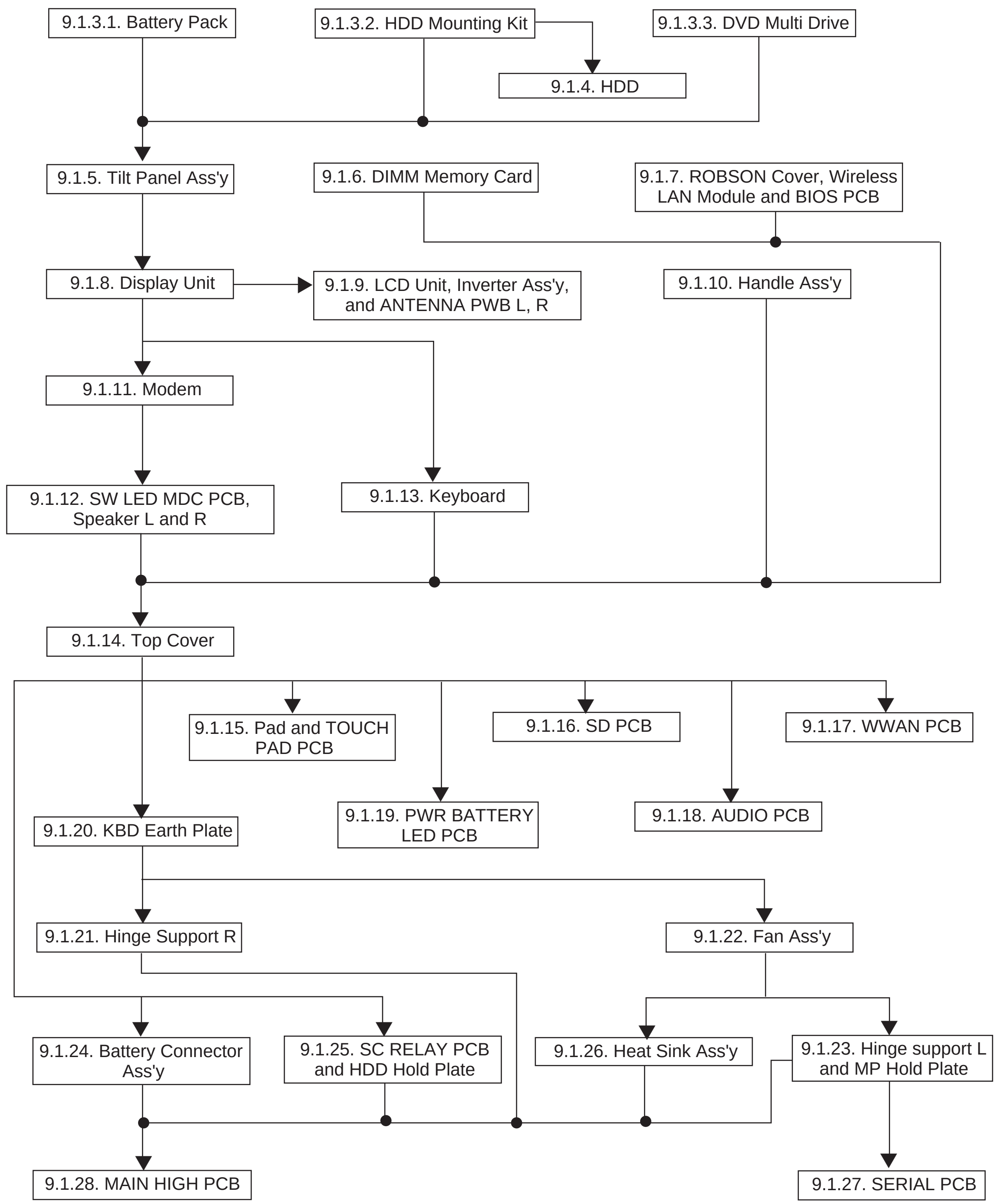
Note:

Power off the computer. Do not shut down to the Suspend or hibernation mode.
Do not add peripherals while the computer is in the Suspend or hibernation mode; abnormal operation may result.

9.1. Disassembly Instructions

9.1.1. Disassembly Flowchart

The chart below shows the various parts which should be removed in order to remove the parts that are to be replaced.
Parts can be replaced efficiently be following the disassembly steps in the chart.



9.1.2. Preparation

Before disassembling, be sure to make the following preparations.

- Shut down Windows and turn off the power.
- Disconnect the AC adaptor.
- Remove the optional DIMM memory card and PCMCIA card if they are connected.
- Remove other devices if they are connected.

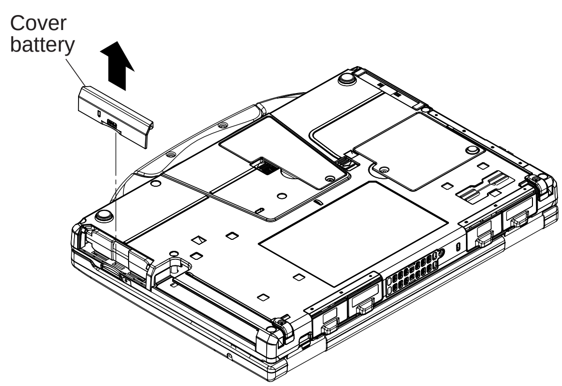
Attention:

- Please execute writing BIOS ID when you exchange the Main Board.
- You cannot reuse the Conductive Clothes and the heat dissipating parts such as Sheet and Rubber. Use new parts.

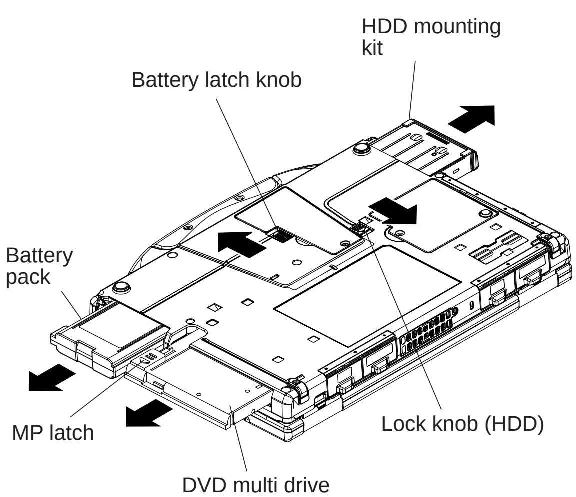
9.1.3. Removing the Battery Pack, HDD Mounting Kit and DVD Multi Drive

9.1.3.1. Battery Pack

1. Remove the Cover Battery.



2. Pull out the Battery Pack with sliding the Battery Latch Knob.



9.1.3.2. HDD Mounting Kit

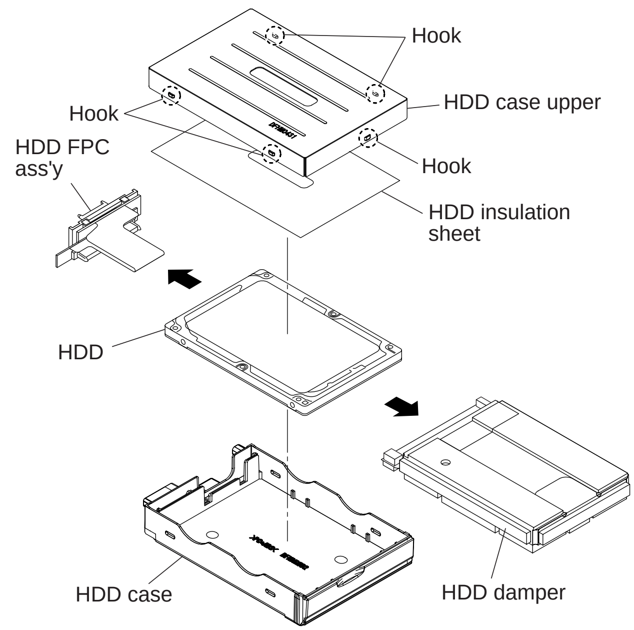
1. Pull out the HDD Mounting Kit with sliding the Lock Knob (HDD).

9.1.3.3. DVD Multi Drive

1. Pull out the DVD Multi Drive with pushing the MP Latch.

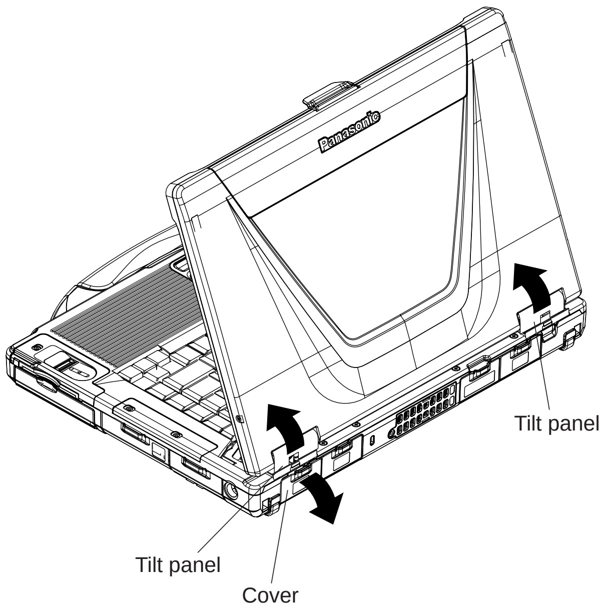
9.1.4. Removing the HDD

1. Remove the six Hooks, and remove the HDD Case Upper , HDD case and HDD Insulation Sheet.
2. Remove the HDD from the HDD Dumper.
3. Disconnect the HDD FPC Ass'y from the HDD.

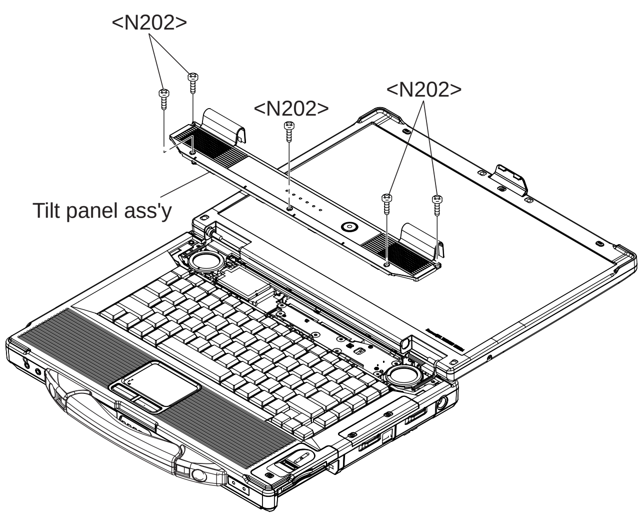


9.1.5. Removing the Tilt Panl Ass'y

1. Turn the Cover down and pull the Tilt Panel in the direction of arrows.



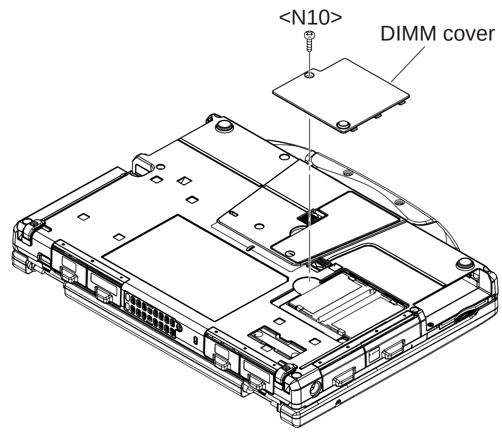
2. Remove the five Screws <N202>, and remove the Tilt Panel Ass'y.



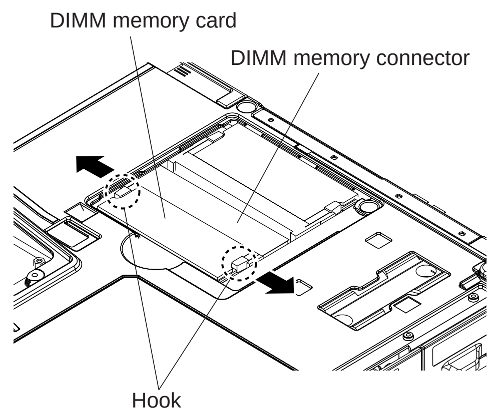
Screws <N202> : DRSB2+4FKLT

9.1.6. Removing the DIMM Memory Card

1. Remove the Screw <N10>, and remove the DIMM Cover.



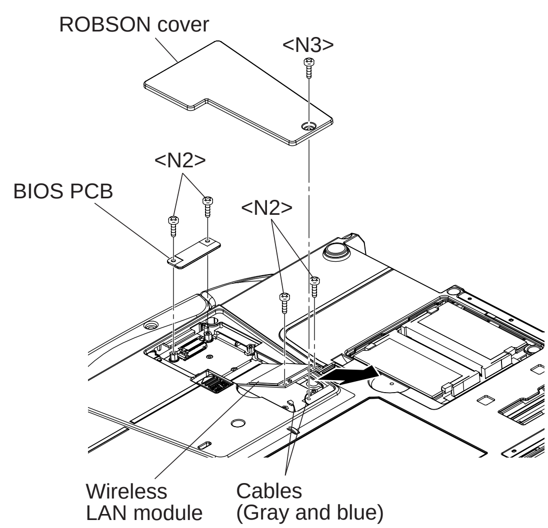
2. Open the right and left Hooks of the DIMM Memory Card outward, and remove the DIMM Memory Card.



Screws <N10>: DRSB2+3FKLT

9.1.7. Removing the ROBSON Cover, Wireless LAN Module and BIOS PCB

1. Remove the Screw <N3>, and remove the ROBSON Cover.



9.1.7.1. Wireless LAN Module

1. Remove the two Screws <N2> and two Cables(Gray and Blue).
2. Pull out the Wireless LAN Module in the direction of arrows.

9.1.7.2. BIOS PCB

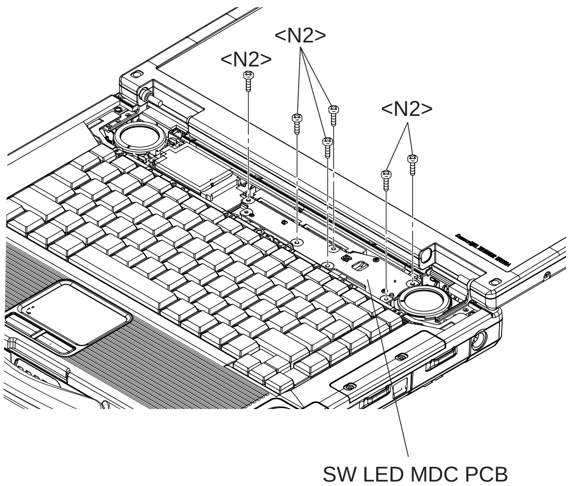
1. Remove the two Screws <N2>, and remove the BIOS PCB.

Screws <N2> : DFHE5122YA

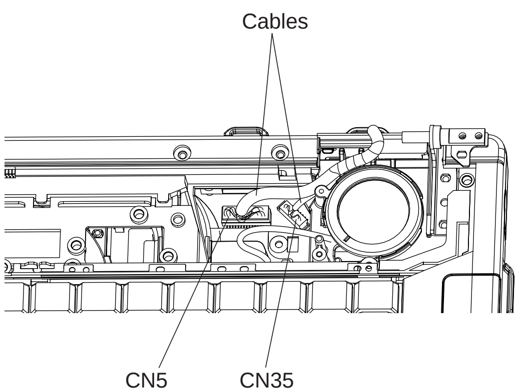
Screws <N3> : DRHM0065ZA

9.1.8. Removing the Display unit

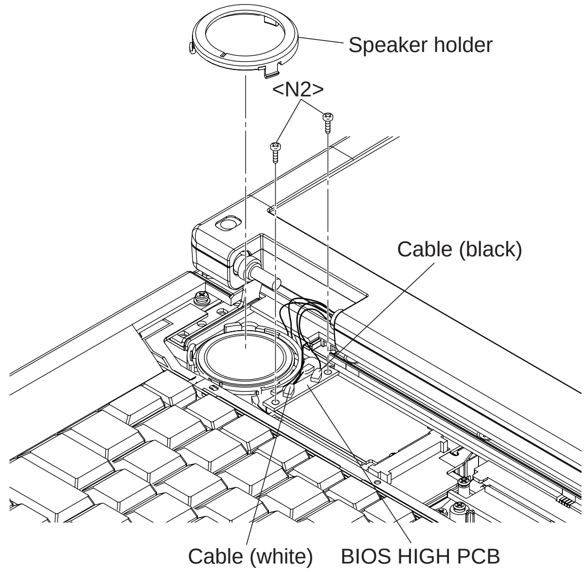
1. Remove the six Screws <N2>, and turn over the SW LED MDC PCB.



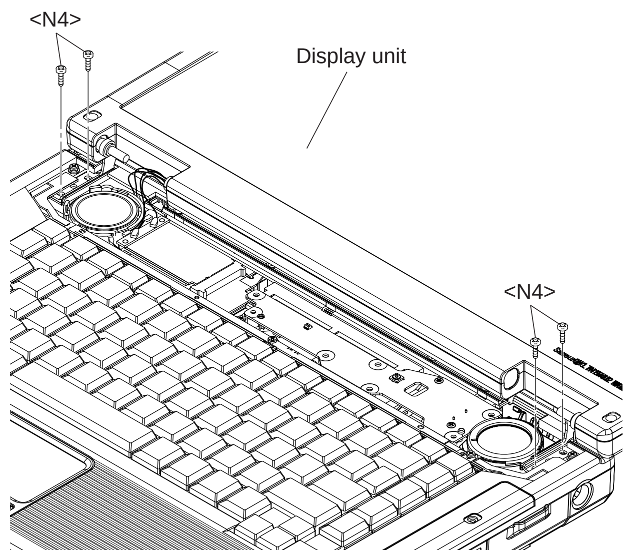
2. Disconnect the two Cables from the Connectors (CN5 and CN35).



3. Remove the Speaker Holder L and four Cables (black, white, blue and grey).
Remove the two Screws <N2>, and BIOS HIGH PCB.



4. Remove the four Screws <N4>, and remove the Display unit.

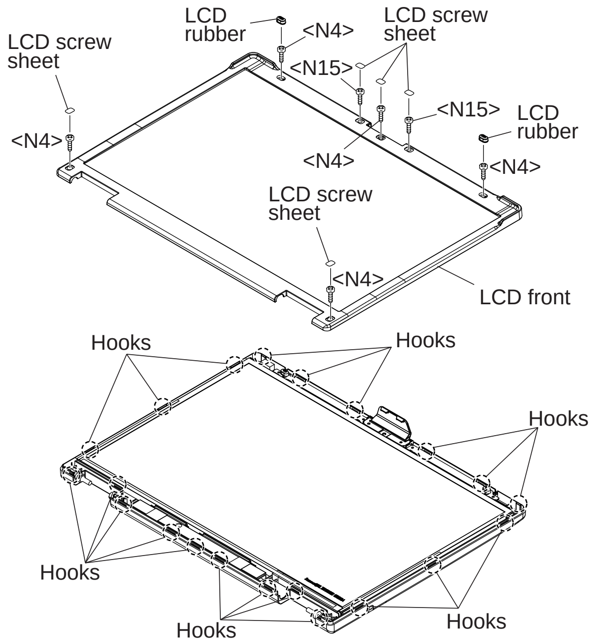


Screws <N2> : DFHE5122YA

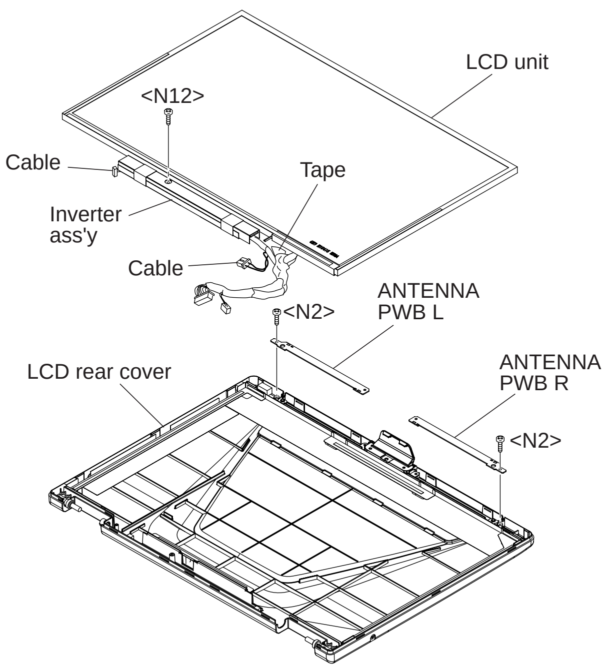
Screws <N4> : DRHM0093ZA

9.1.9. Removing the LCD unit, Inverter Ass’y and ANTENNA PWB L,R

1. Remove the two LCD Rubbers and five LCD Sheets.
2. Remove the five Screws <N4> and two Screws <N15>.
3. Release the twenty-one Hooks fixing the LCD Front to the LCD unit, remove the LCD Front.



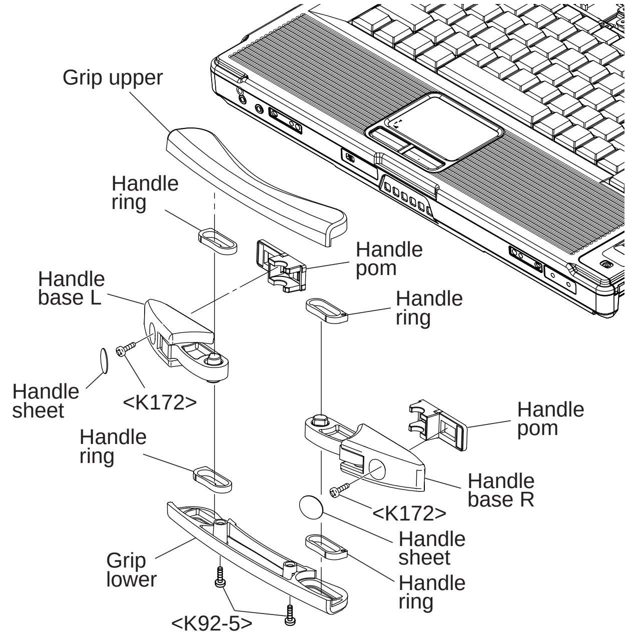
4. Remove the Screw <N12> and Tape, and remove the LCD unit.
5. Disconnect the two Cables, and remove the Inverter Ass’y.
6. Remove the eleven Tapes and two Screws <N2>, and remove the ANTENNA PWB L, R.



Screws <N2> : DFHE5122YA
Screws <N4> : DRHM0093ZA
Screws <N12> : DXSB2+4FNLT
Screws <N15> : XQN17+BJ6FJ

9.1.10. Removing the Handle Ass'y

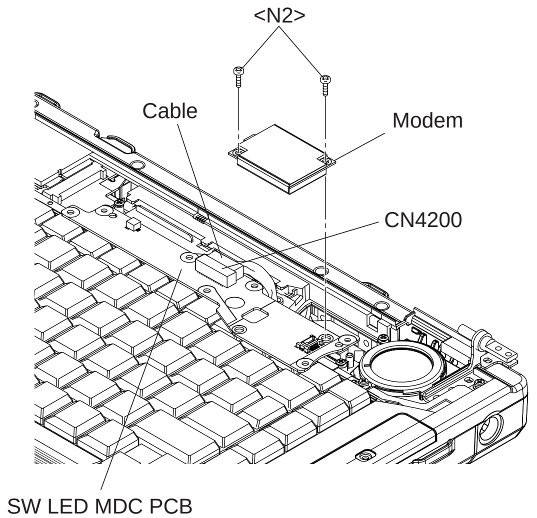
1. Remove the two Handle Sheets and two Screws <K172>, remove the Handle Ass’y.
2. Remove the two Screws <K92-5>, and disassemble the Handle Ass’y (Grip Upper, Grip Lower, Handle Base L, Handle Base R, Handle Ring and Handle Pom) .



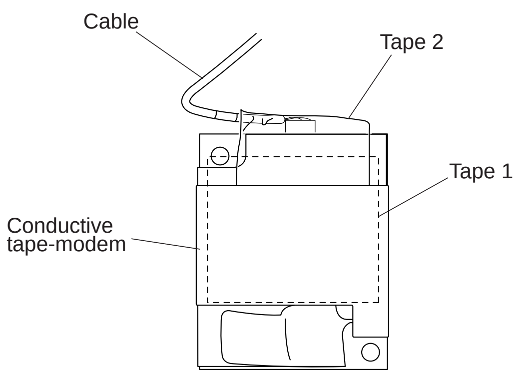
Screws <K92-5>: DRSB3+8FKLT
Screws <K172>: DRYN4+J12KLT

9.1.11. Removing the Modem

1. Disconnect the Cable from the Connecor(CN4200).
2. Remove the two Screws <N2>, and remove the Modem.



3. Remove the Tape1, Conductive tape-modem and Tape2, disconnect the Cable from Modem

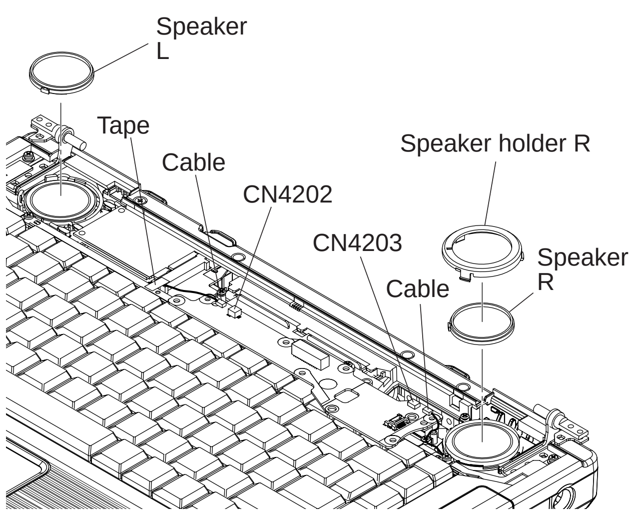


Screws <N2> : DFHE5122YA

9.1.12. Removing the SW LED MDC PCB and Speakers

9.1.12.1. SW LED MDC PCB

1. Disconnect the Cables from the Connectors(CN4202 and CN4203), and remove SW LED MDC PCB.



9.1.12.2. Speaker R

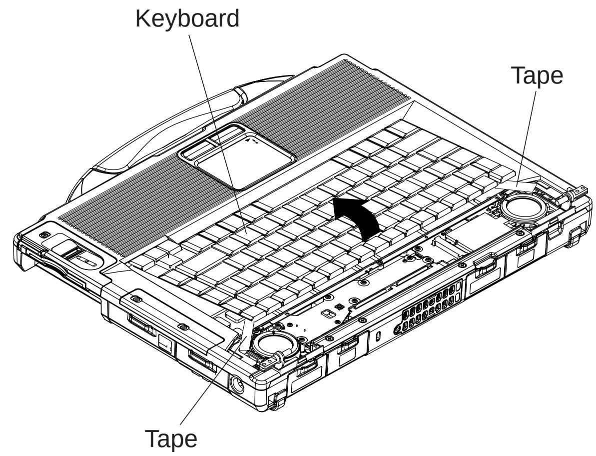
1. Remove the Speaker Holder R, and remove the Speaker R

9.1.12.3. Speaker L

1. Remove the Tape, and remove the Speaker L.

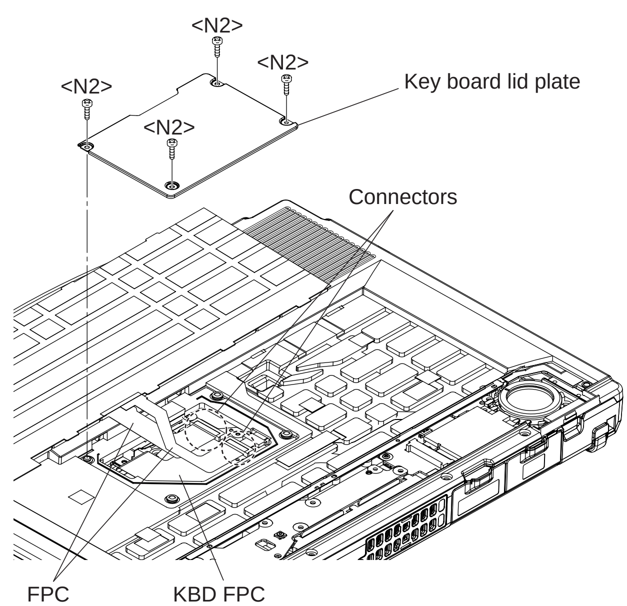
9.1.13. Removing the Keyboard

1. Remove the two Tapes.
2. Lift the upper part of the Keyboard and draw it backward, and then turn the Keyboard over forward.



Note:
Take extreme care when peeling off the tape as it is strongly sticked.

3. Remove the four Screws <N2>, and remove the Keyboard Lid Plate.
4. Disconnect the two FPC from the two Connectors (KBD FPC).

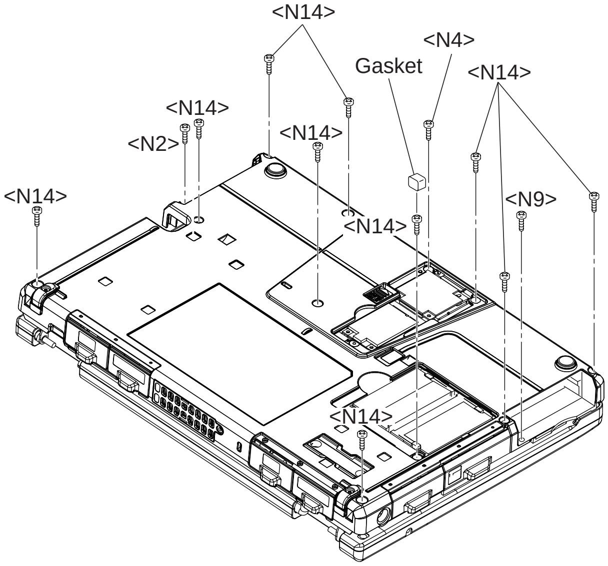


5. Remove the Keyboard.

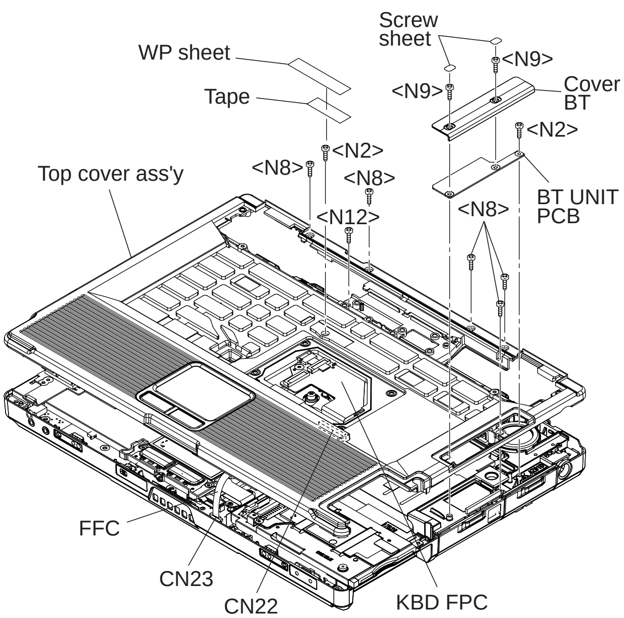
Screws <N2> : DFHE5122YA

9.1.14. Removing the Top Cover

1. Remove the Gasket.
2. Remove the Screws <N2>, <N4>, <N9> and ten Screws <N14>



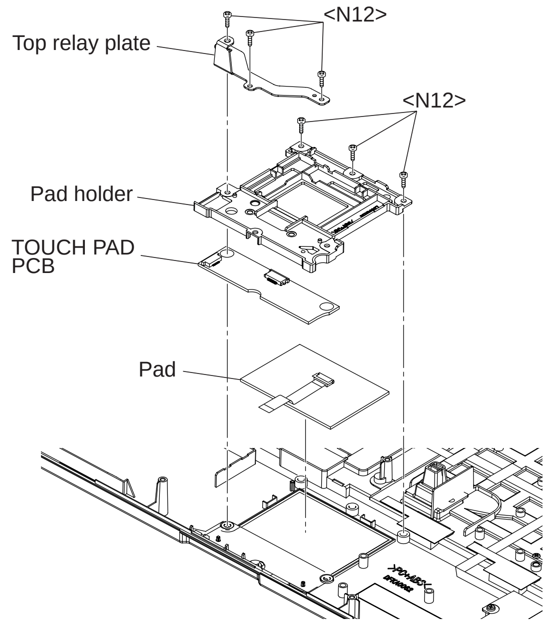
3. Turn the unit to the face, remove the Screw <N12> and five Screws <N8>.
4. Remove the WP Sheet and Tape, and remove the Screw <N12>.
5. Remove the two Screw Sheets.
   Remove the two Screws <N9>, and remove the Cover BT.
   Remove the Screw <N2> and disconnect the Cable from the BT UNIT PCB, and remove it.
6. Disconnect the FFC and KBD FPC from the Connectors(CN23 and CN22), and lift up the Top Cover Ass'y and remove it.



Screws <N2> : DFHE5122YA
Screw <N4> : DRHM0093ZA
Screws <N8> : DRHM5054XAT
Screws <N9> : DRHM5104ZAT
Screws <N12> : DXSB2+4FNLT
Screws <N14> : XTB26+10GJKT

9.1.15. Removing the Pad and TOUCH PAD PCB

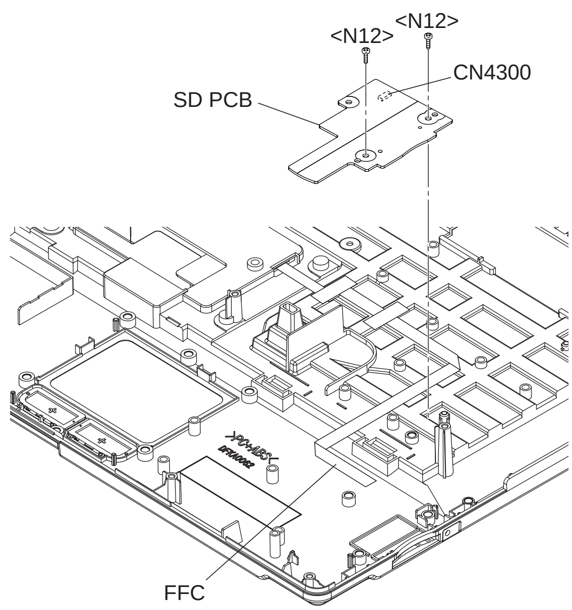
1. Remove the six Screws <N12>.
2. Remove the Top Relay Plate and Pad Holder.
3. Remove the Pad and TOUCH PAD PCB.



Screws <N12> : DXSB2+4FNLT

9.1.16. Removing the SD PCB

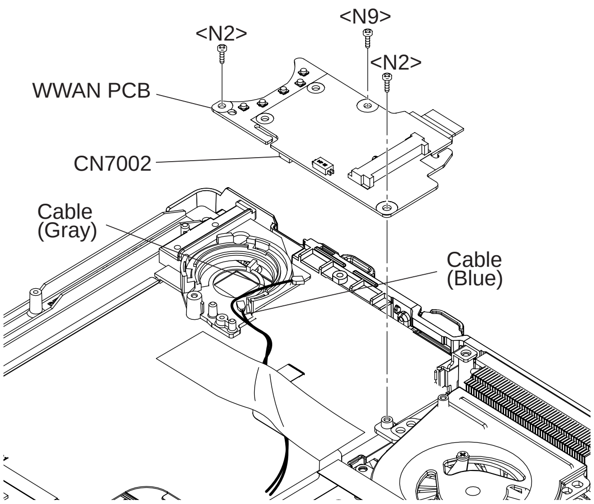
1. Remove the two Screws <N12>.
2. Disconnect the FFC from the Connector(CN4300), and remove the SD PCB.



Screws <N12> : DXSB2+4FNLT

9.1.17. Removing the WWAN PCB

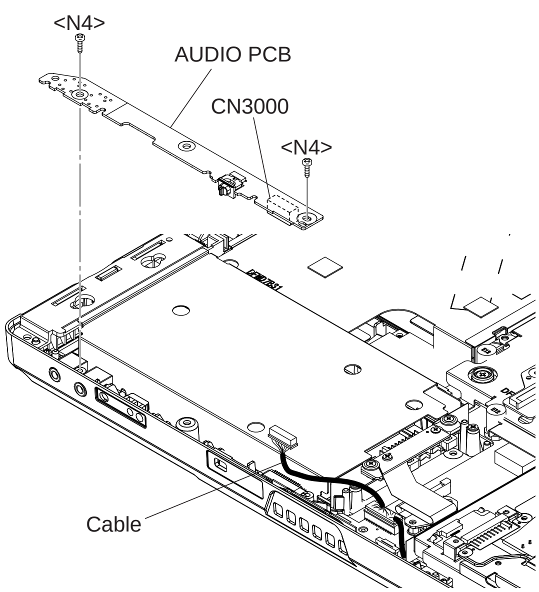
1. Disconnect the Cables(Gray and Blue) from the WWAN PCB.
2. Remove the two Screws <N2> and the Screw <N9>.
3. Disconnect the FPC from the Connector(CN7002), and remove the SD PCB.



Screws <N2> : DFHE5122YA
Screw <N9> : DRHM5104ZAT

9.1.18. Removing the AUDIO PCB

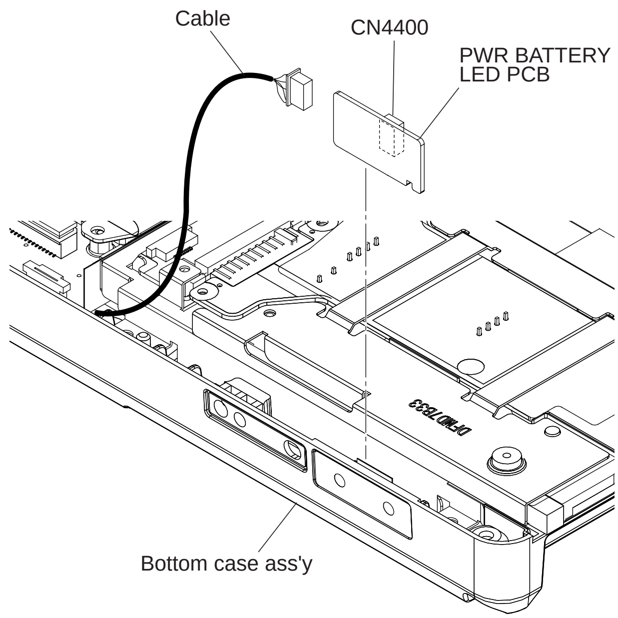
1. Remove the two Screws <N4>.
2. Disconnect the Cable from the Connector(CN3000), and remove the AUDIO PCB.



Screw <N4> : DRHM0093ZA

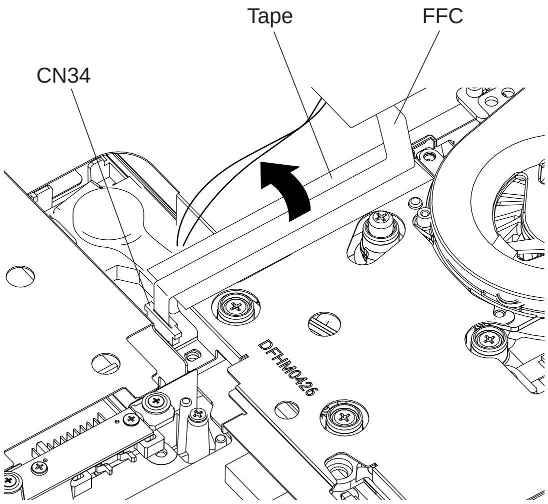
9.1.19. Removing the PWR BATTERY LED PCB

1. Remove the PWR BATTERY LED PCB, and disconnect the Cable from the Connector(CN4400).

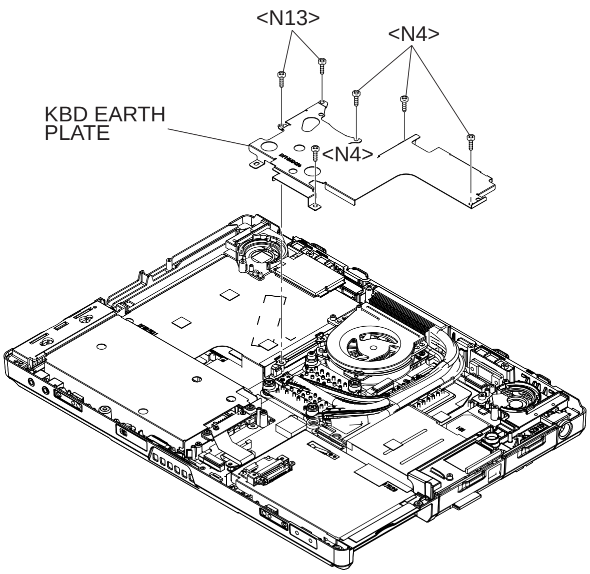


9.1.20. Removing the KBD Earth Plate

1. Remove the Tape in the direction of arrow.



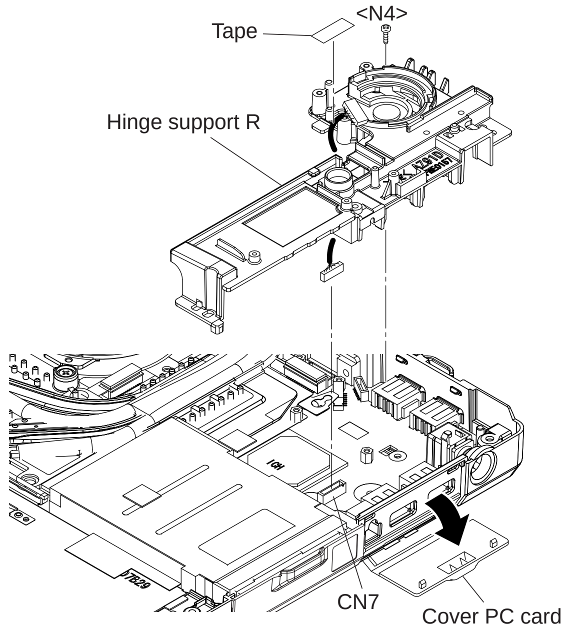
2. Remove the four Screws <N4> and two Screws <N13>, and remove the KBD Earth Plate.



Screw <N4> : DRHM0093ZA
Screw <N13> : DXYN2+F12FNL

9.1.21. Removing the Hinge Support R

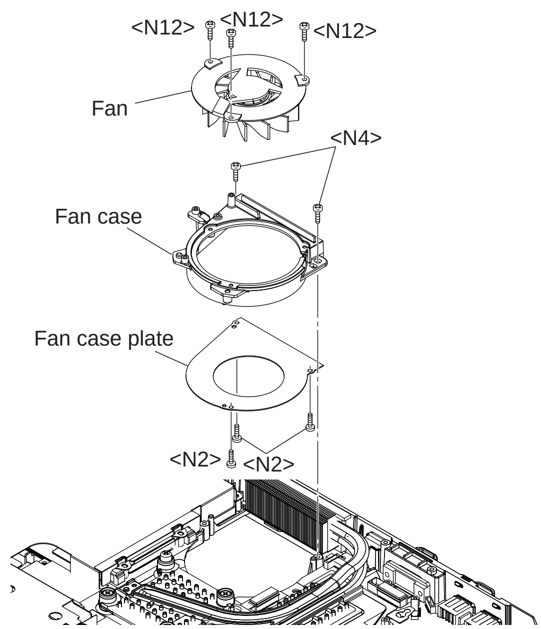
1. Peel off the Tape and remove the Screw <N4>.
2. Disconnect the Cable from the Connector (CN7).
3. Turn the Cover PC Card down in the direction of arrow, and remove the Hinge Support R.



Screw <N4> : DRHM0093ZA

9.1.22. Removing the Fan Ass'y

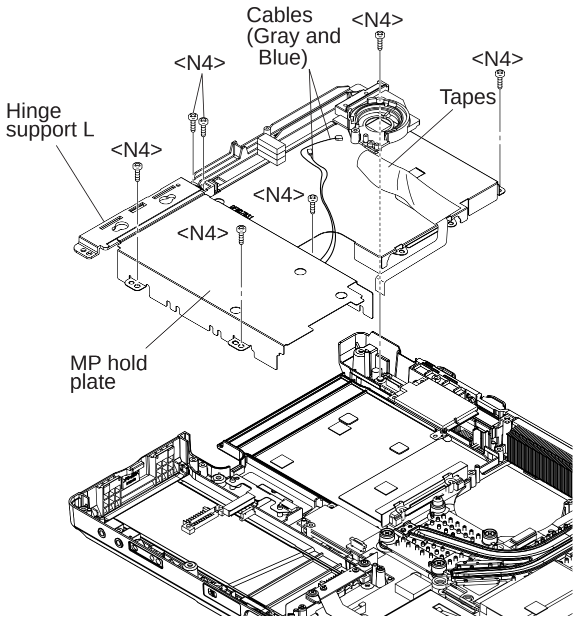
1. Disconnect the Cable from the Connector(CN18).
2. Remove the two Screws <N4>, and remove the Fan Ass'y.
3. Remove the three Screws <N12>, and remove the Fan.
4. Remove the three Screws <N2>, and remove the Fan Case Plate.



Screw <N2> : DFHE5122YA
Screw <N4> : DRHM0093ZA
Screw <N12> : DXSB2+4FNLT

9.1.23. Removing the Hinge Support L and MP Hold Plate

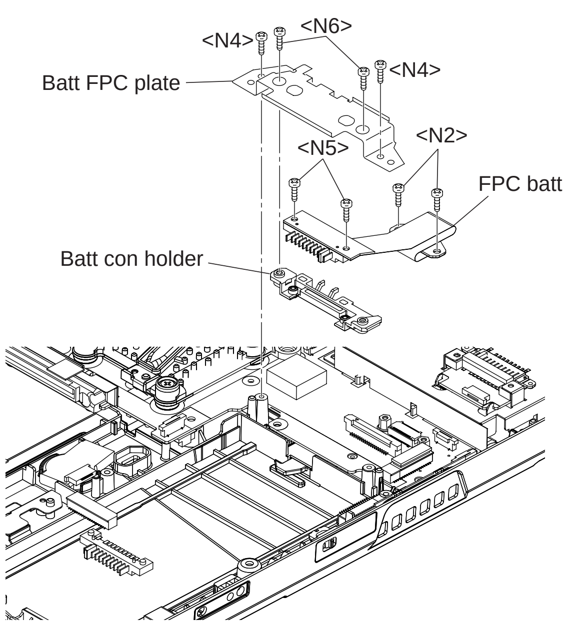
1. Peel off the three Tapes and remove the two Cables(Gray and Blue).
2. Remove the six Screws <N4>, remove the Hinge Support L and MP Hold Plate.



Screw <N4> : DRHM0093ZA

9.1.24. Removing the Battery Connector Ass’y

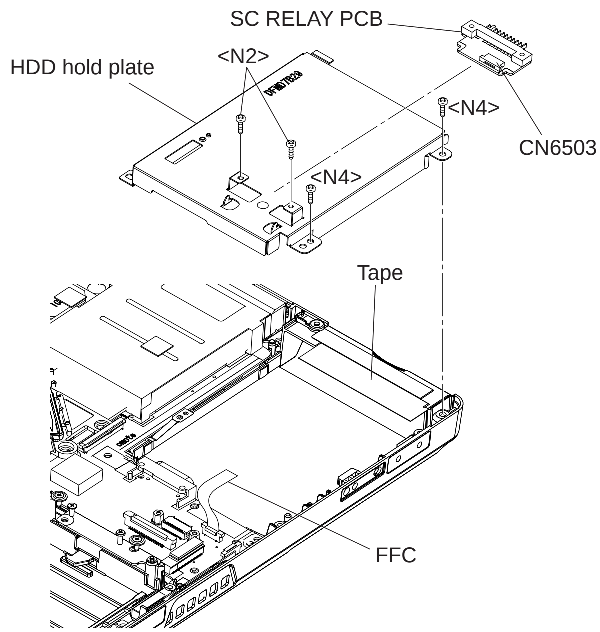
1. Remove the two Screws <N2> and <N4>, and remove the Battery Connector Ass’y.
2. Remove the two Screws <N6>, and remove the Batt FPC Plate.
3. Remove the two Screws <N5>, and remove the Batt Con Holder from the FPC Batt.



Screw <N2> : DFHE5122YA
Screw <N4> : DRHM0093ZA
Screw <N5> : DRHM0112ZA
Screw <N6> : DRHM0115ZA

9.1.25. Removing the SC RELAY PCB and HDD Hold Plate

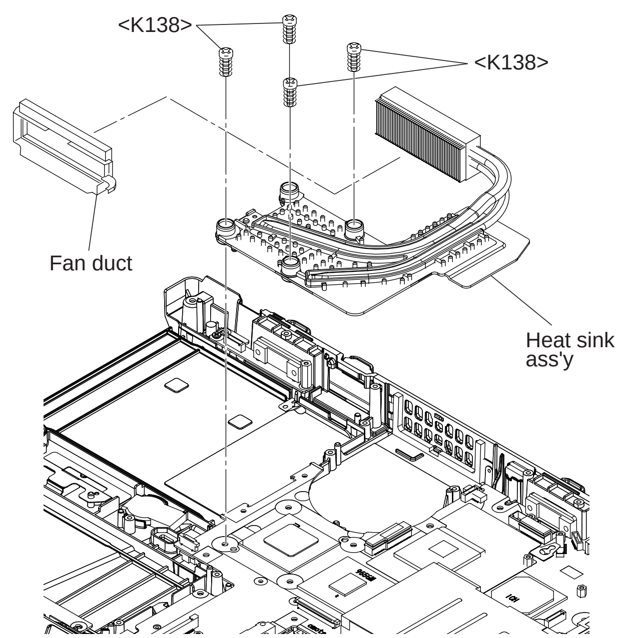
1. Disconnect the FFC from the Connector(CN6503).
2. Remove the two Screws <N2>, and remove the SC RELAY PCB.
3. Remove the two Screws <N4>, and remove the HDD Hold Plate.



Screw <N2> : DFHE5122YA
Screw <N4> : DRHM0093ZA

9.1.26. Removing the Heat Sink Ass’y

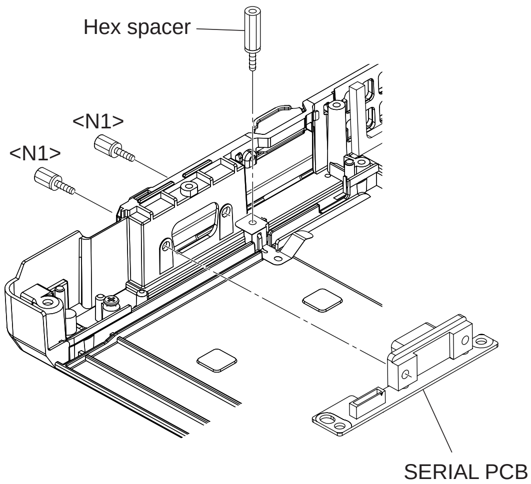
1. Remove the Fan Duct.
2. Remove the four Screws <K138>, and remove the Heat Sink Ass’y.



Screw <K138> : DRHM0119ZAT

9.1.27. Removing the SERIAL PCB

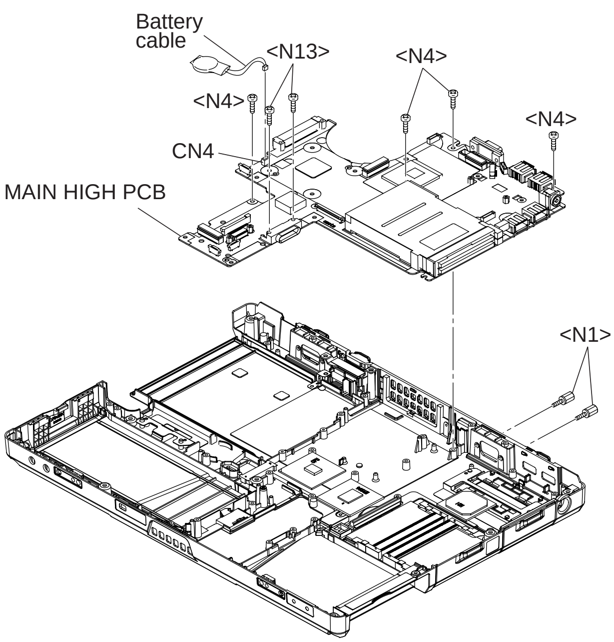
1. Remove the two Screws <N1> and Hex Spacer.
2. Remove the SERIAL PCB.



Screw <N1> : DFHE5035ZB

9.1.28. Removing the MAIN HIGH PCB

1. Remove the two Screws <N1>, four Screws <N4> and two Screws <N13>.
2. Disconnect the Battery Cable from the Connector(CN4).
3. Remove the MAIN HIGH PCB.



Screw <N1> : DFHE5035ZB
Screw <N4> : DRHM0093ZA
Screw <N13> : DXYN2+F12FNL

9.2. Reassembly Instructions

9.2.1. Attention when CF-52 series is repaired

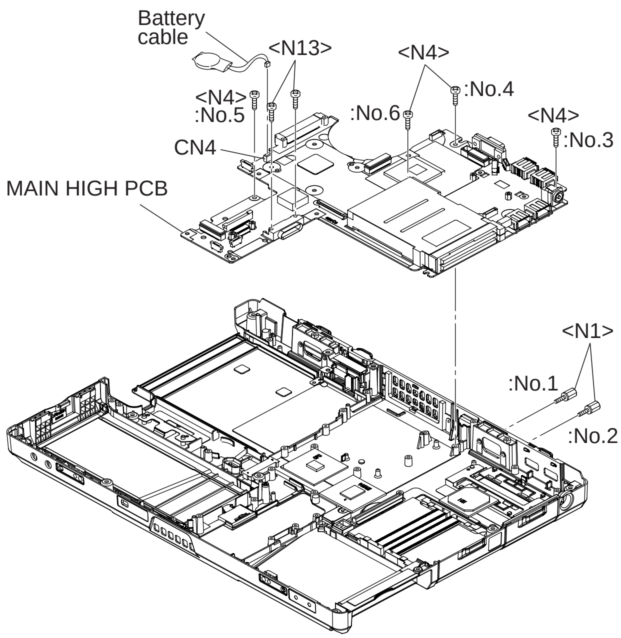
- Please execute writing BIOS ID when you exchange the Main Board.
- You cannot reuse the Conductive Clothes and the heat dissipating parts such as Sheet and Rubber. Use new parts.

9.2.2. Setting the MAIN HIGH PCB

Note:

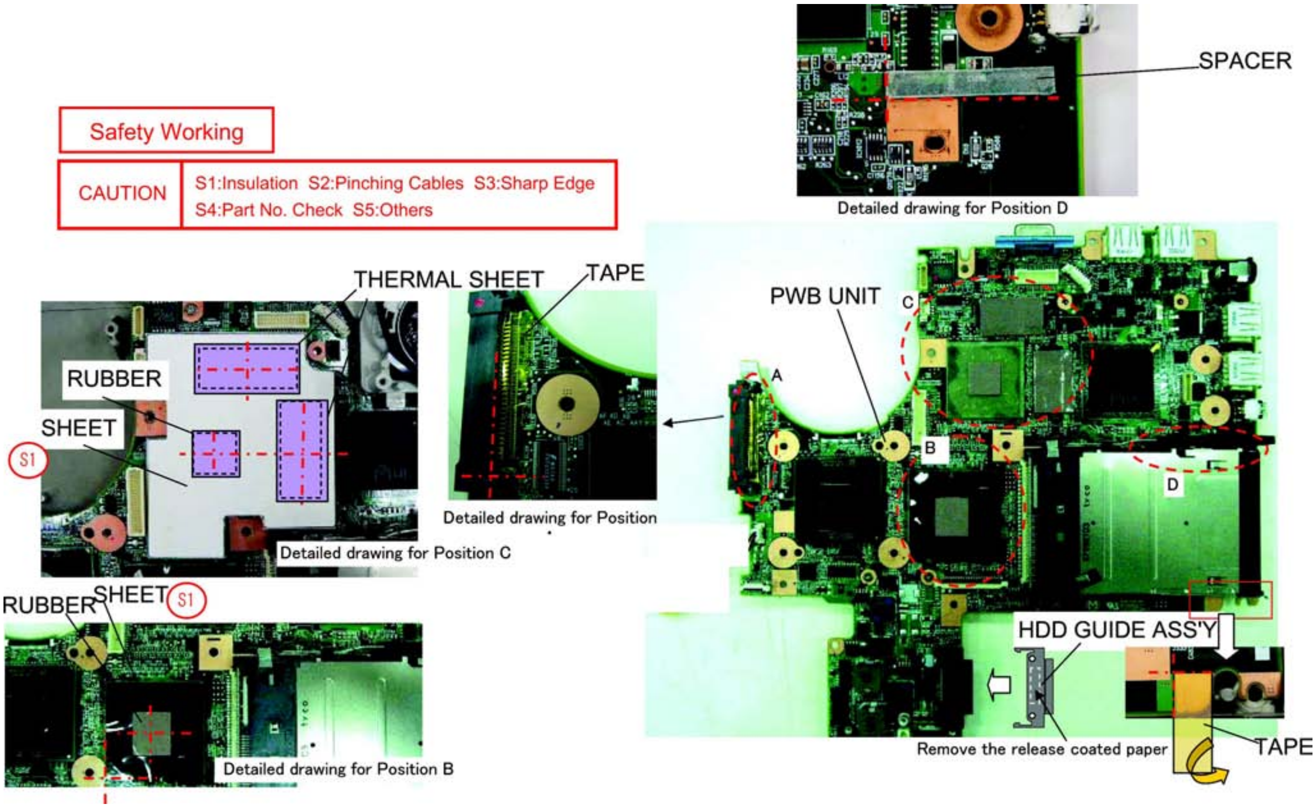
After replacing the Main Board, rewrite the BIOS ID.

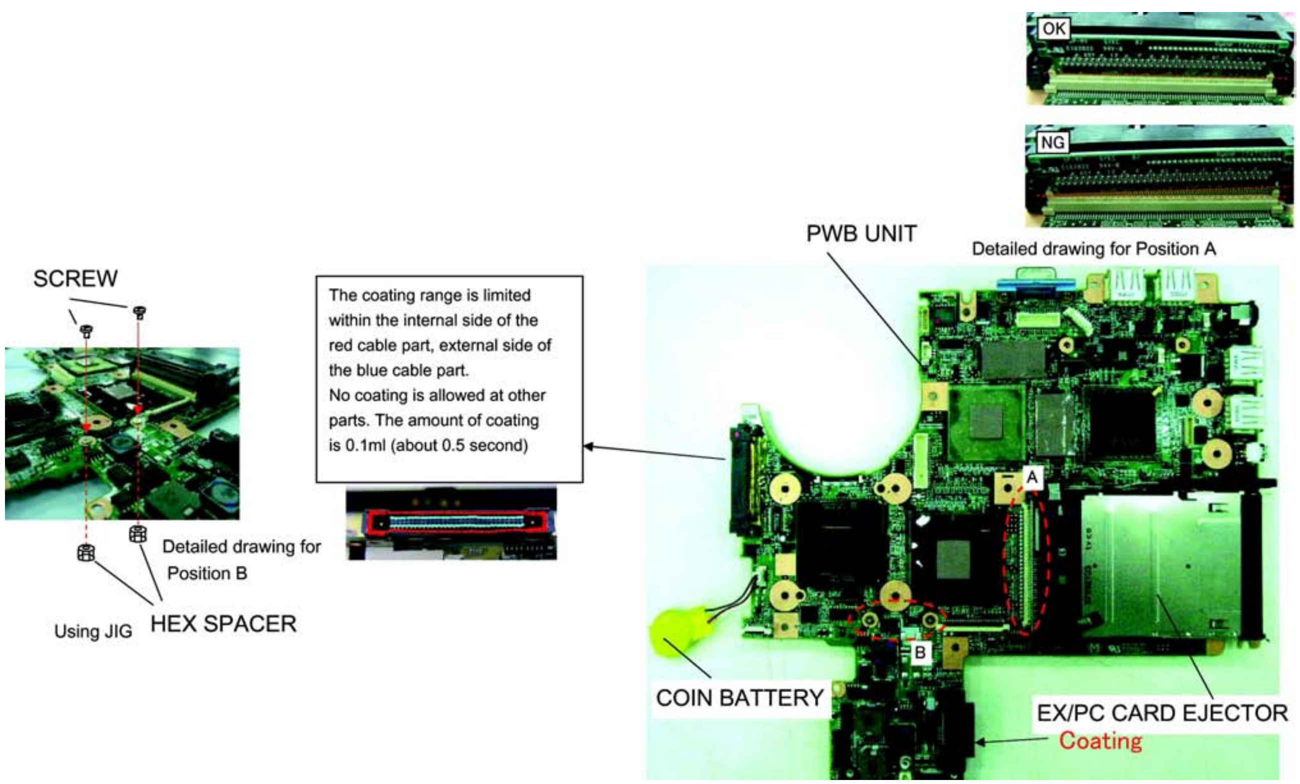
1. Set the MAIN HIGH PCB to the computer.
2. Fix the MAIN HIGH PCB using the two Screws <N1>. No.1, No.2
3. Fix the MAIN HIGH PCB using the two Screws <N4>. No.3 to No.6
4. Fix the MAIN HIGH PCB using the two Screws <N13>.
5. Connect the Battery Cable to the Connector (CN42).

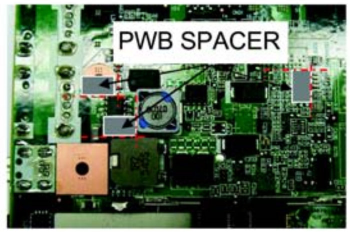


Screw <N1> : DFHE5035ZB
Screw <N4> : DRHM0093ZA
Screw <N13> : DXYN2+F12FNL
Screws <N9>: DFHE5025XA

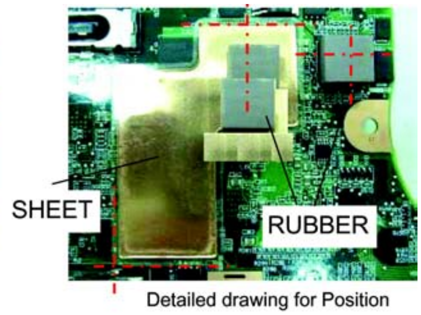
■ **Setting of Main PCB before assembling.**



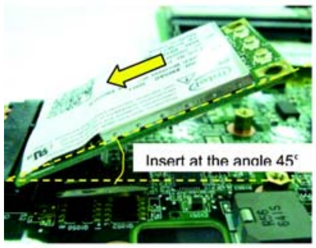


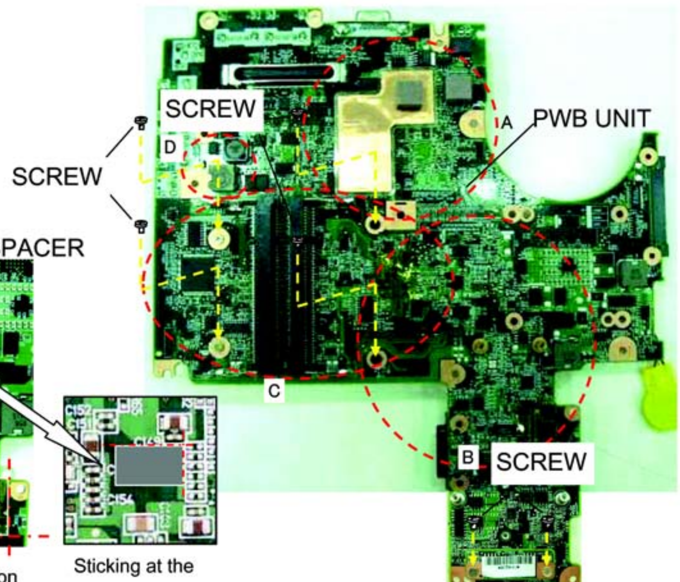


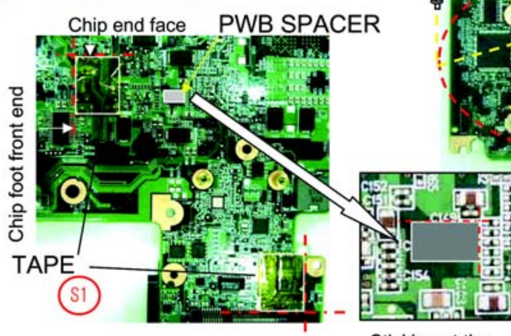
Detailed drawing for Position



Detailed drawing for Position



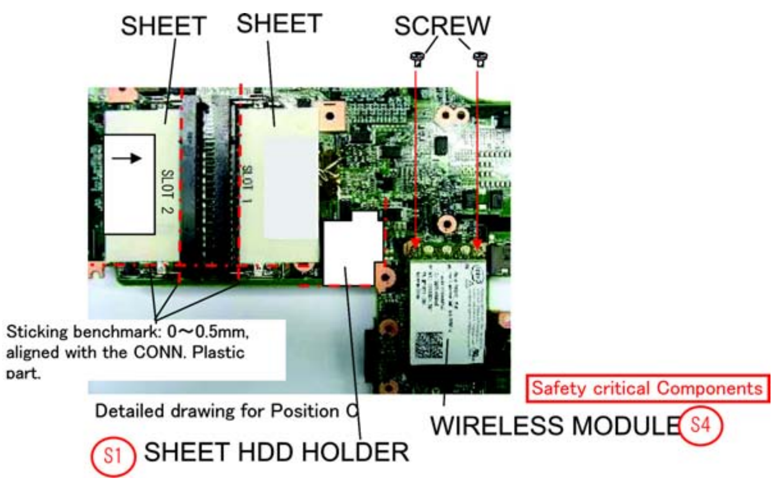




Detailed drawing for Position

Sticking at the plane area

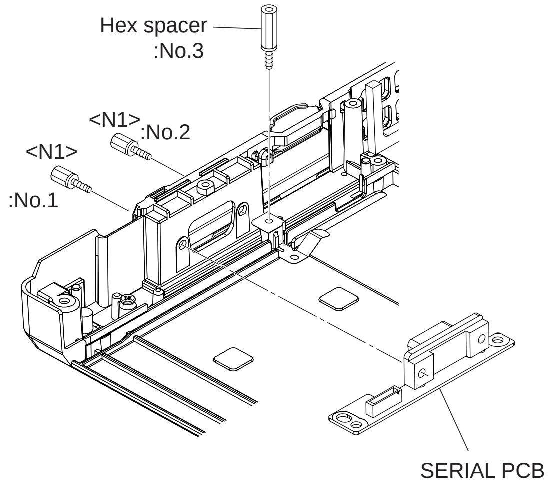
Safety Working	CAUTION	S1:Insulation S2:Pinching Cables S3:Sharp Edge S4:Part No. Check S5:Others



Detailed drawing for Position C

9.2.3. Setting the SERIAL PCB

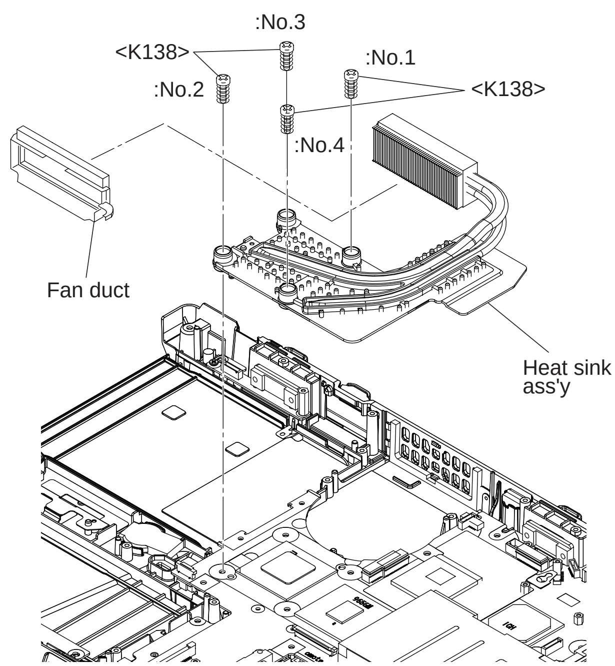
1. Set the SERIAL PCB to the computer.
2. Fix the SERIAL PCB using the two Screws <N1>. No1, No.2
3. Tighten the Hex Spacer to the SERIAL PCB. No.3



Screw <N1> : DFHE5035ZB

9.2.4. Setting the Heat Sink Ass’y

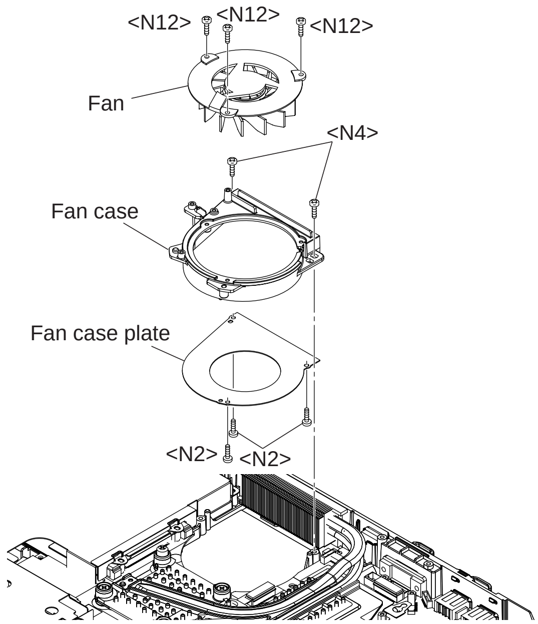
1. Set the Fan Duct to the Heat Sink Ass’y.
2. Fix the Heat Sink Ass’y to the MAIN PCB using the four Screws <K138>. No.1 to No.4



Screw <K138> : DRHM0119ZAT

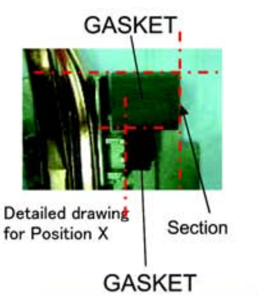
9.2.5. Setting the Fan Ass'y

1. Fix the Fan Case Plate to the Fan Case using the three Screws <N2>.
2. Fix the Fan to the Fan Case using the three Screws <N12>.
3. Set the Fan Ass'y to the computer, and fix it using two Screws <N4>. No.1, No.2

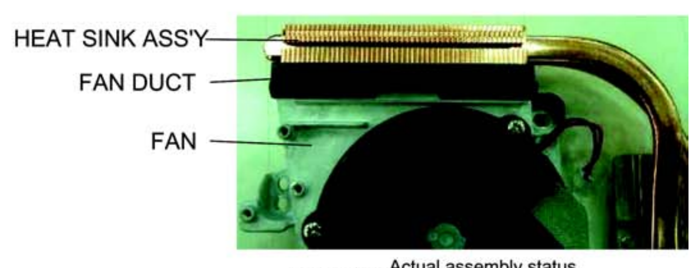


Screw <N2> : DFHE5122YA
Screw <N4> : DRHM0093ZA
Screw <N12> : DXSB2+4FNLT

■How to assemble the Heat Sink Ass'y and Fan Ass'y.

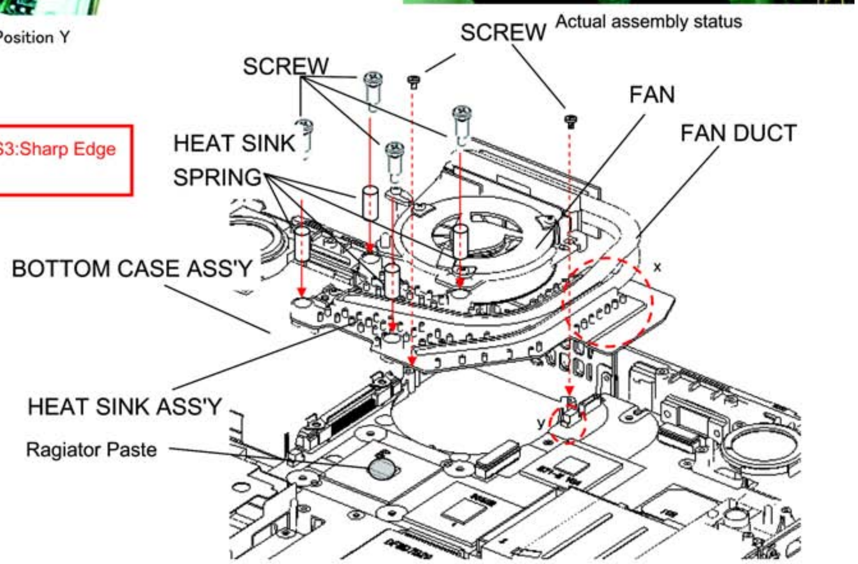


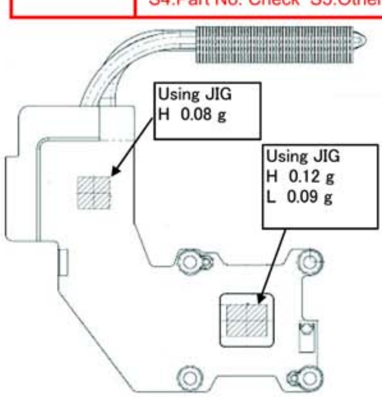




Safety Working

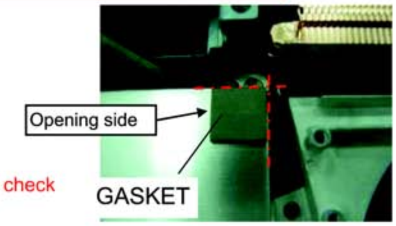
CAUTION	S1:Insulation S2:Pinching Cables S3:Sharp Edge S4:Part No. Check S5:Others



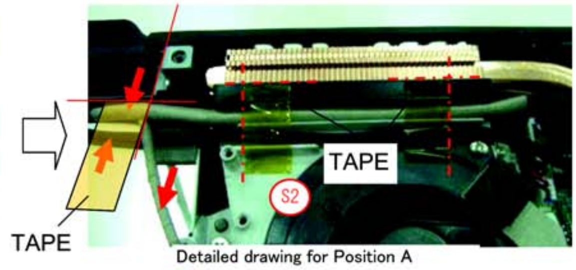


CAUTION	S1:Insulation S2:Pinching Cables S3:Sharp Edge S4:Part No. Check S5:Others

Safety Working



Note: The cable setting method for the electric cable indicated by the red arrows shall be in accordance with the following figure

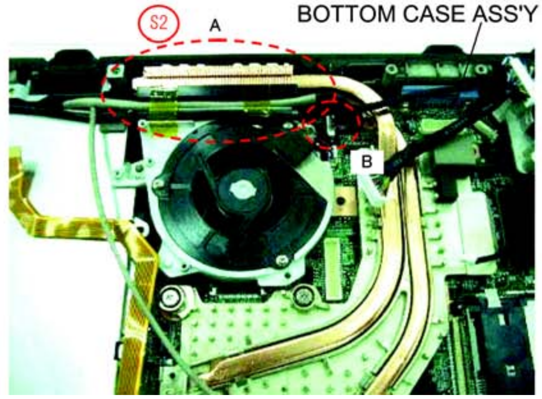


Detailed drawing for Position A

Note: After inserting, please check the assembly and mark it

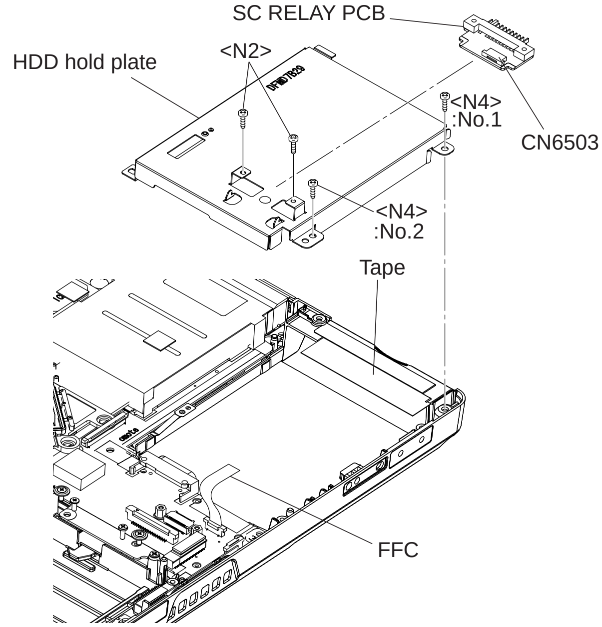


Detailed drawing for Position B

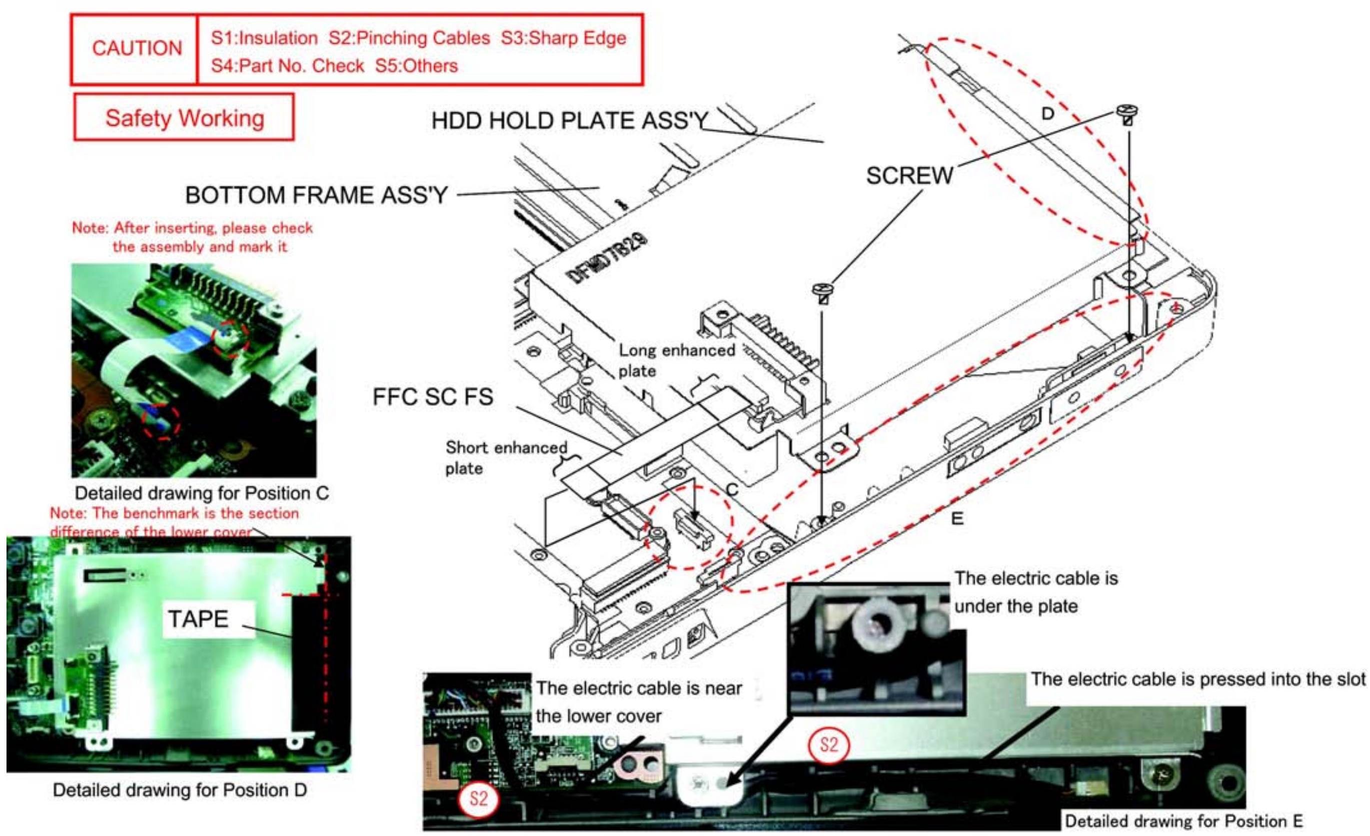


9.2.6. Setting the SC RELAY PCB and HDD Hold Plate

1. Set the SC REALY PCB to the HDD Hold Plate, and fix it using two Screws <N2>. No.1, No.2
2. Fix the HDD Hold Plate to the MAIN HIGH PCB using the two Screws <N4>. No.3, No.4
3. Connect the FFC to the Connector(CN6503) and paste the Tape.

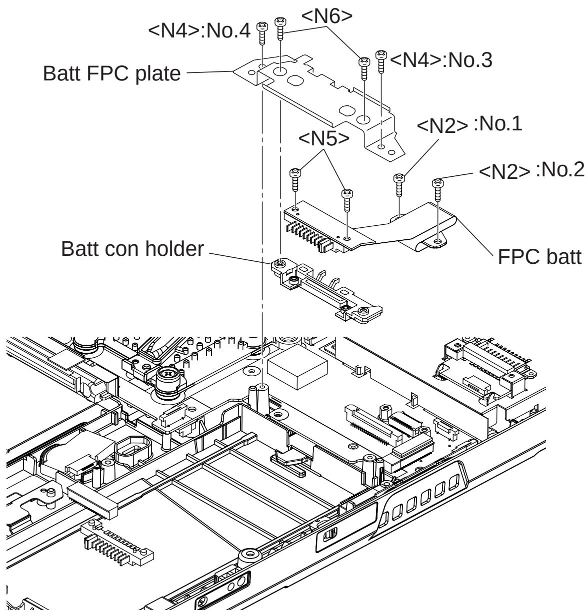


Screws <N2> : DFHE5122YA
Screws <N4> : DRHM0093ZA



9.2.7. Setting the Battery Connector Ass'y

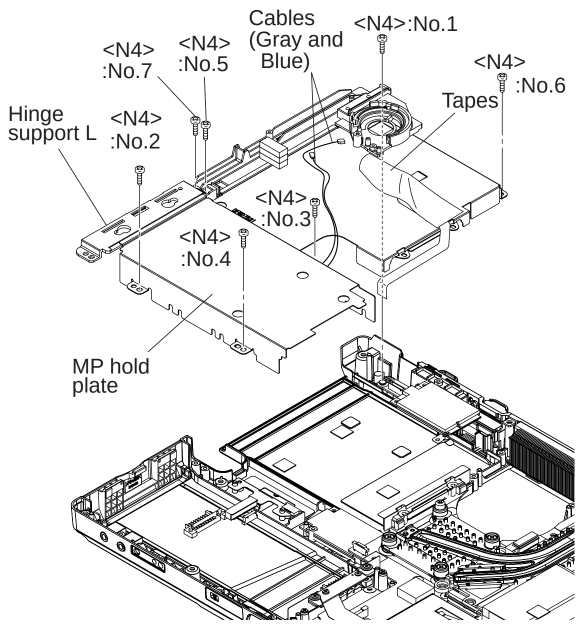
1. Fix the Batt Con Holder to the FPC Batt using the two Screws <N5>.
2. Fix the Batt Con Holder to the Batt FPC Plate using the two Screws <N6>.
3. Fix the Batt FPC Plate to the computer using the two Screws <N4>. No.1, No.2
4. Connect the FPC Batt's connector to the connector(CN1000), and fix the FPC Batt to the MAIN HIGH PCB using the two Screws <N2>. No.1, No.2



Screw <N2> : DFHE5122YA
Screw <N4> : DRHM0093ZA
Screw <N5> : DRHM0112ZA
Screw <N6> : DRHM0115ZA

9.2.8. Setting the Hinge Support L and MP Hold Plate

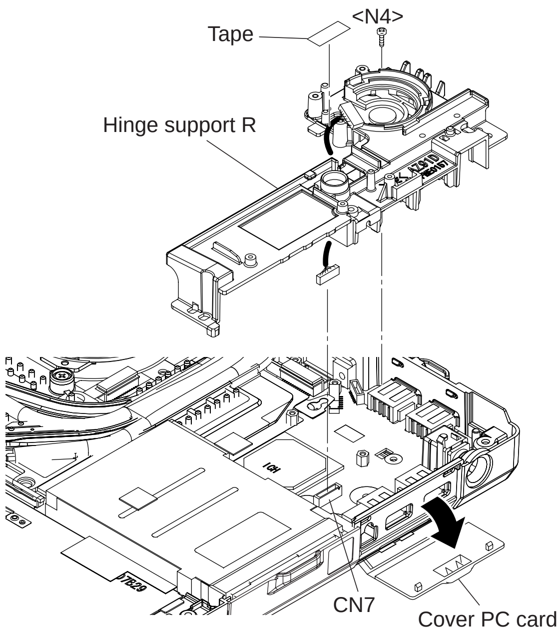
1. Set the Hinge Support L and MP Hold Plate to the computer.
2. Fix the Hinge Support L and MP Hold Plate using the six Screws <N4>. No.1 to No.6
3. Paste the Tapes.



Screw <N4> : DRHM0093ZA

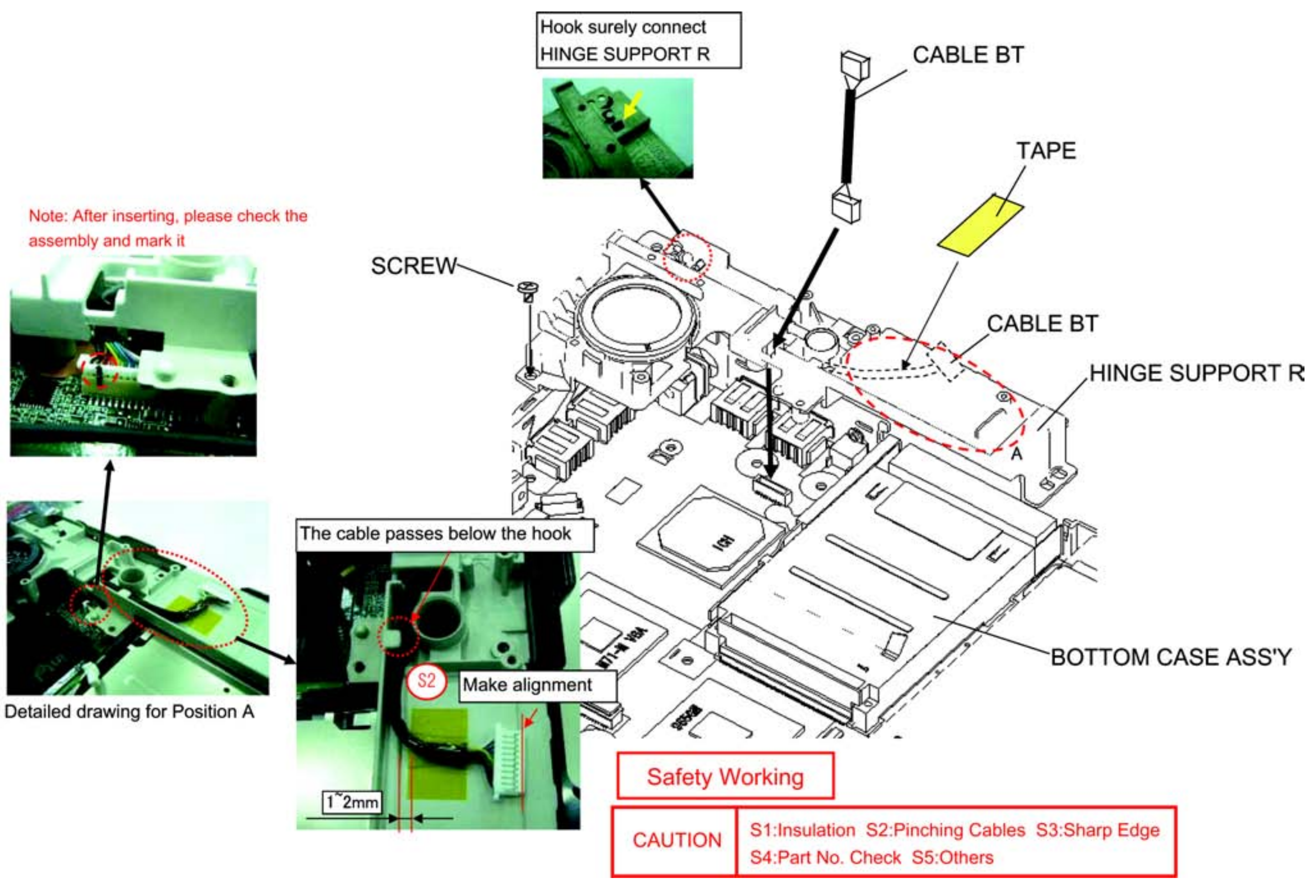
9.2.9. Setting the Hinge Cover R

1. Place the Cable through the rectangled hole of Hinge Support R and connect the Cable to the Connector (CN7).
2. Fix the Hinge Support R to the computer using the Screw <N4>.



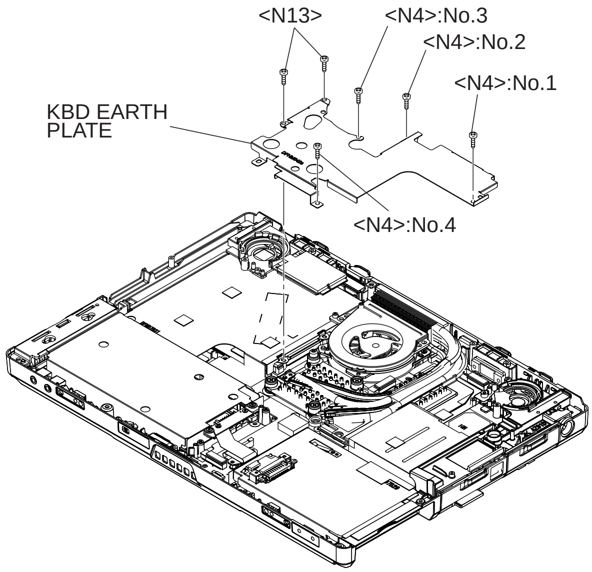
Screw <N4> : DRHM0093ZA

■**How to place the Cable**

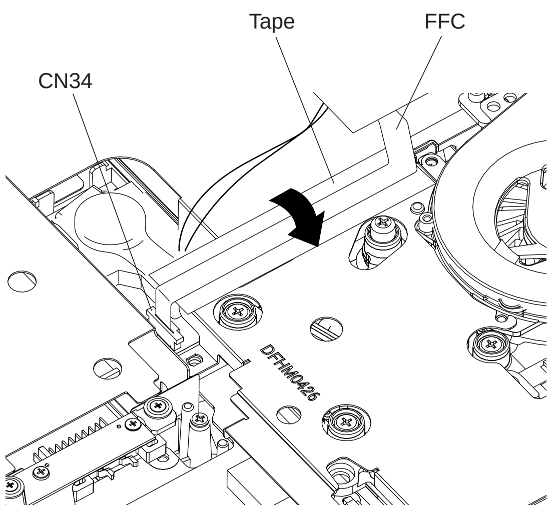


9.2.10. Setting the KBD Earth Plate

1. Set the KBD Earth Plate to the computer.
2. Fix the KBD Earth Plate using the four Screws <N4>. No.1 to No.4
3. Fix the KBD Earth Plate using the two Screws<N13>.



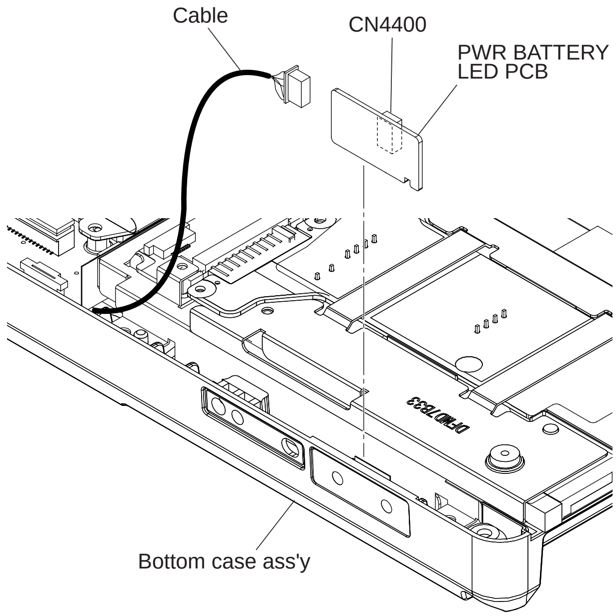
4. Paste the tape, and connect the FPC to the Connector(CN34).



Screw <N4> : DRHM0093ZA
Screw <N13> : DXYN2+F12FNL

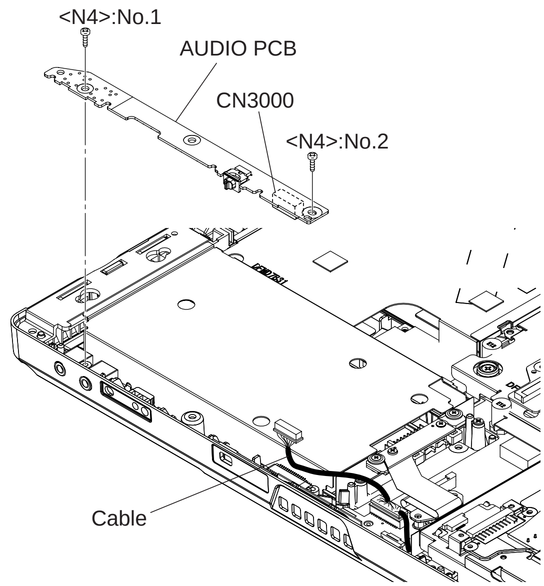
9.2.11. Setting the PWR BATTERY LED PCB

1. Connect the Cabel to the Connector(CN4400), and insert it to the computer.



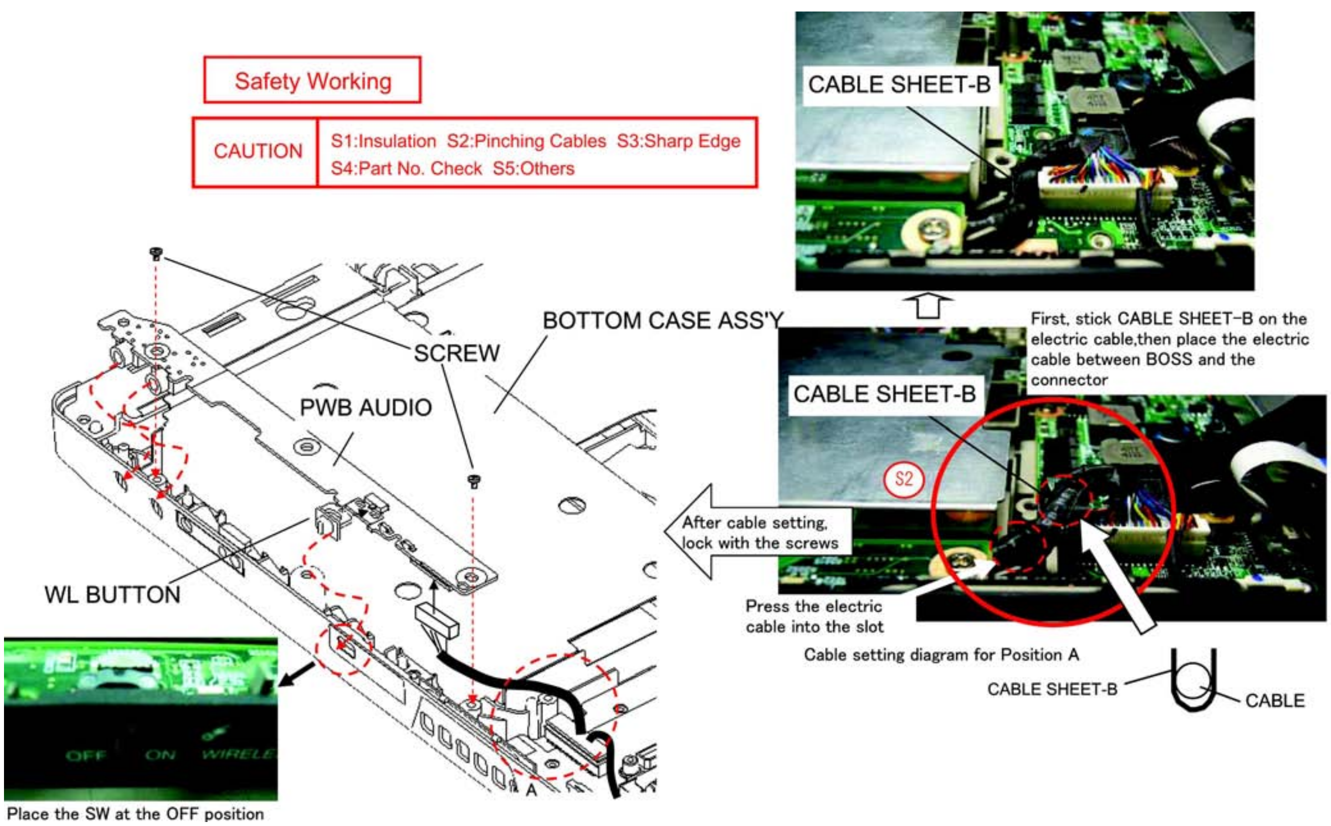
9.2.12. Setting the AUDIO PCB

1. Connect the Cable to the Connector(CN3000).
2. Set the AUDIO PCB to the computer, and fix it using the two Screws <N4>. No.1, No.2



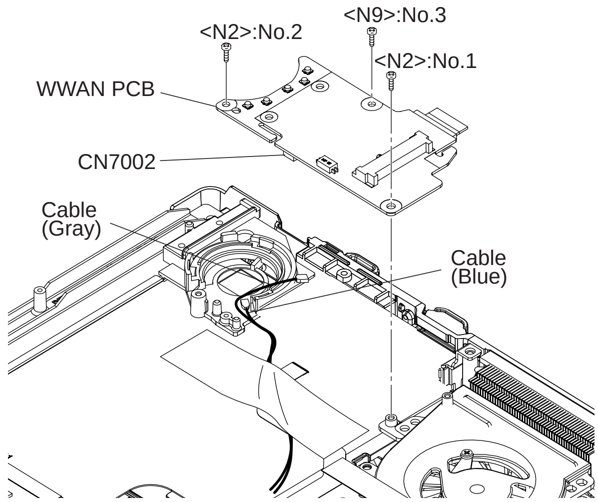
Screw <N4> : DRHM0093ZA

■Arranging the Cable and setting the WL button.



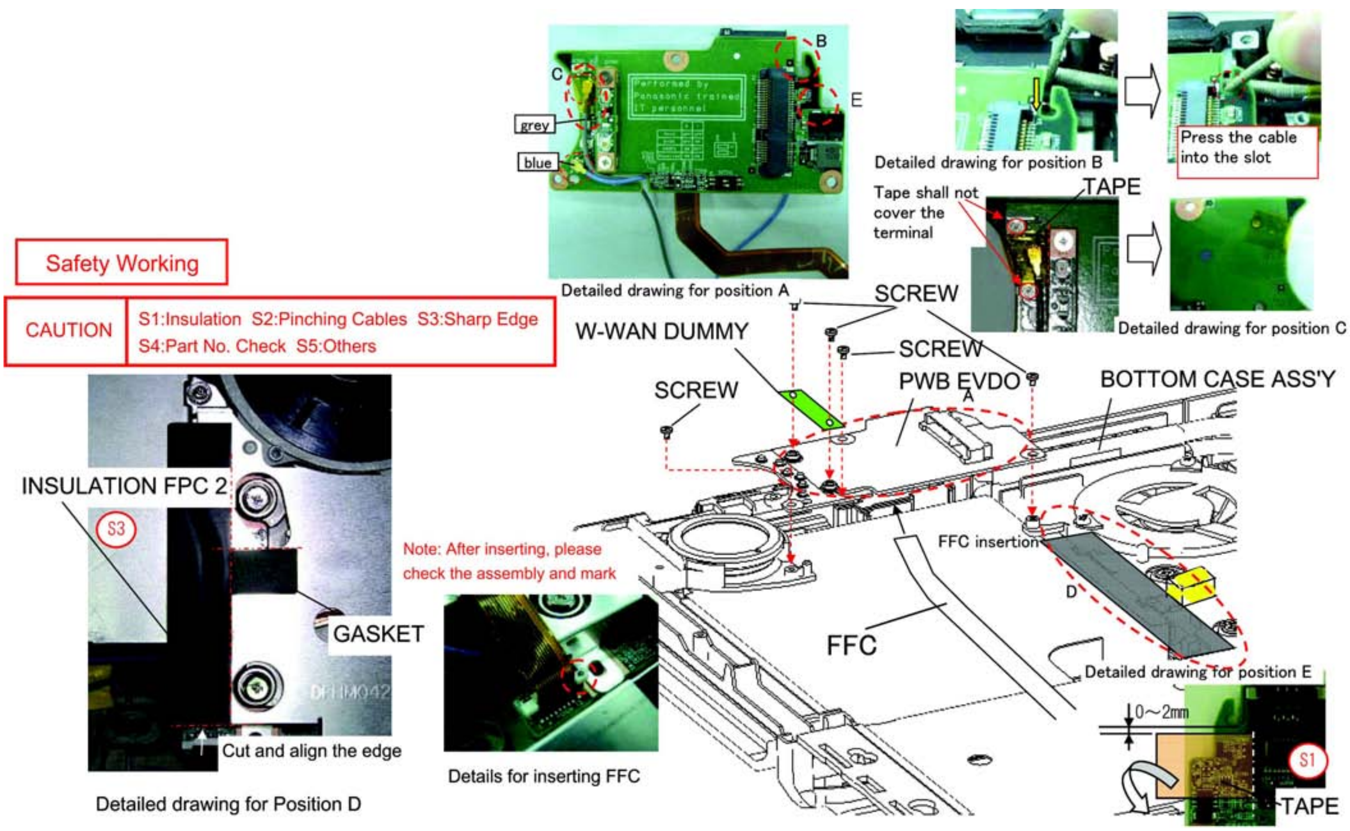
9.2.13. Setting the WWAN PCB

1. Connect the FPC to the Connector(CN7002).
2. Set the WWAN PCB, and fix it using two Screws <N2> and the Screw <N9>. No.1 to No.3
3. Connect the Cable(Gray) to JK7002 and Cable(Blue) to JK7004.



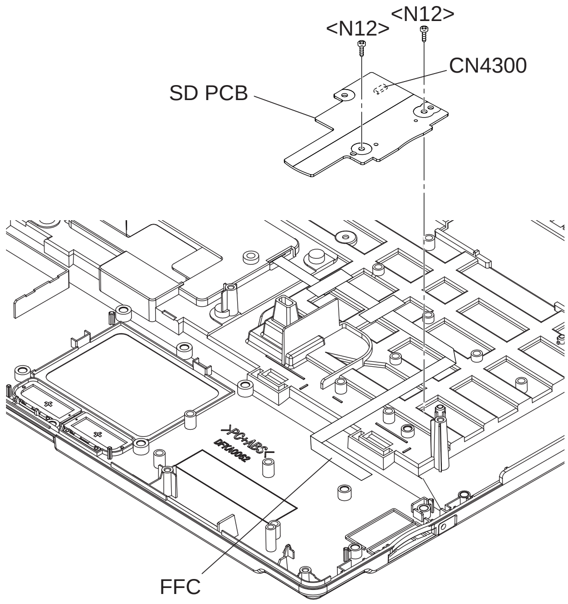
Screw <N2> : DFHE5122YA
Screw <N9> : DRHM5104ZAT

■**Arranging the Cables and Tapes**



9.2.14. Setting the SD PCB

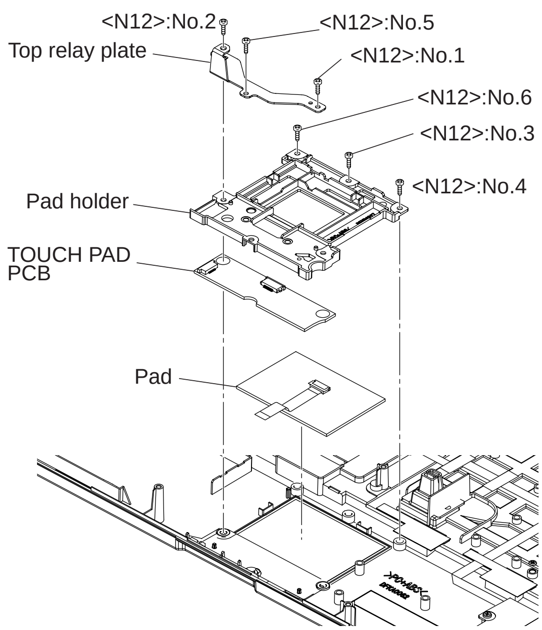
1. Connect the FFC to the Connector(CN4300).
2. Set the SD PCB to the Top Cover, and fix it to using the two Screws <N12>. No.1, No.2



Screw <N12> : DXSB2+4FNLT

9.2.15. Setting the Pad and TOUCH PAD PCB

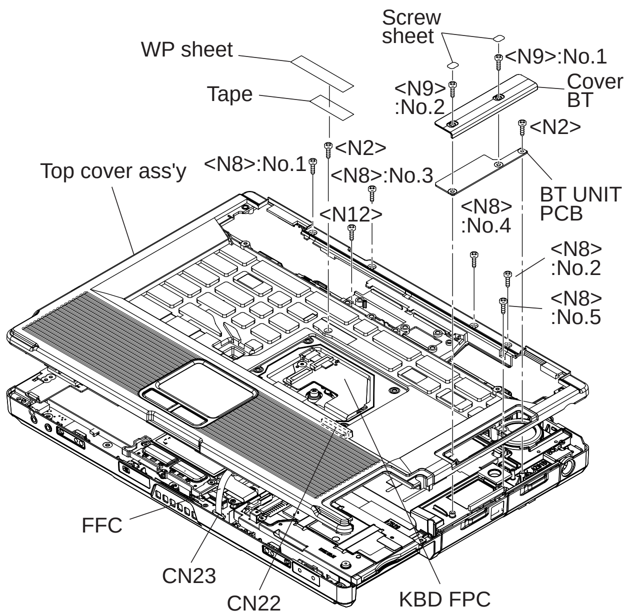
1. Paste the Pad and set the TOUCH PAD PCB to the Top Cover.
2. Set the Pad Holder and Top Relay Plate, and fix them using the six Screws <N12>. No.1 to No.6



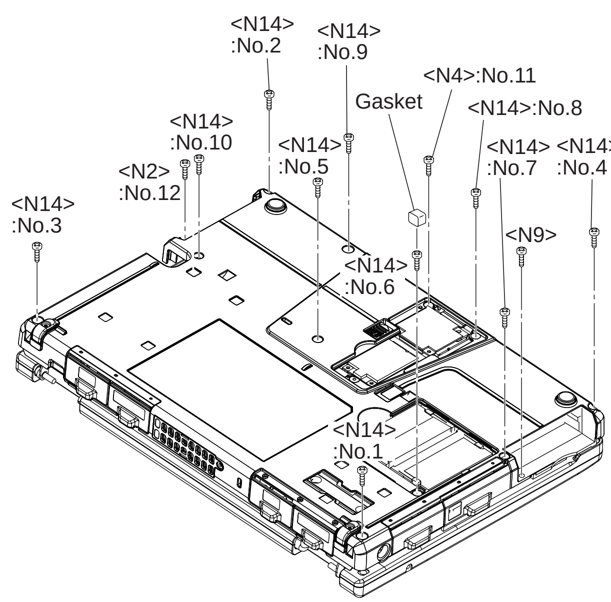
Screw <N12> : DXSB2+4FNLT

9.2.16. Setting the Top Cover

1. Connect the KBD FPC and FFC to the Connectors(CN22 and CN23), and place the Top Cover on the computer.
2. Fix the Top Cover using the five Screws <N8>. No.1 to No.5
3. Fix the Top Cover using the Screw <N12>.
4. Fix the BT UNIT PCB to the Top Cover using the Screw <N2> and connect the Cable to the connector.



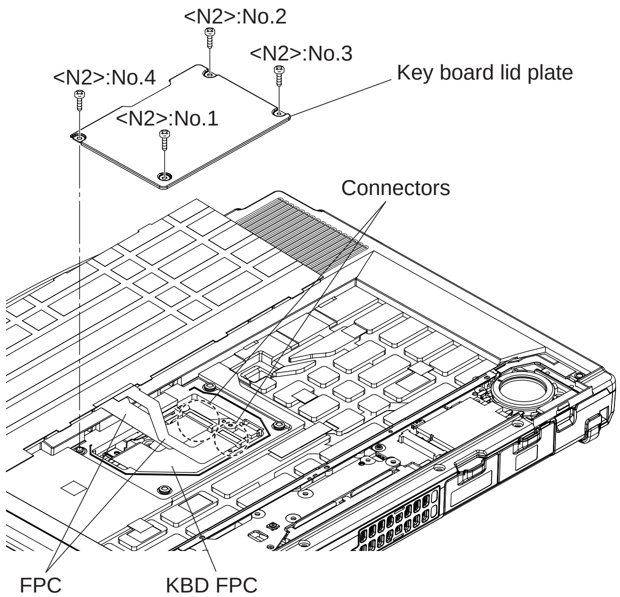
5. Fix the Top Cover using the Screw <N2>, and paste the Tape and WP Sheet on it.
6. Fix the Cover BT to the Top Cover using the two Screws <N9> No.1, No.2, and paste the Screw Sheet on the Screws.
7. Fix the Bottom Case to the Top Cover using the Screw <N2>, <N4> and ten Screws <N14>. No.1 to No.12
8. Fix the Bottom Case using the Screw <N9>.
9. Paste the Gasket on the Screw <N14>.



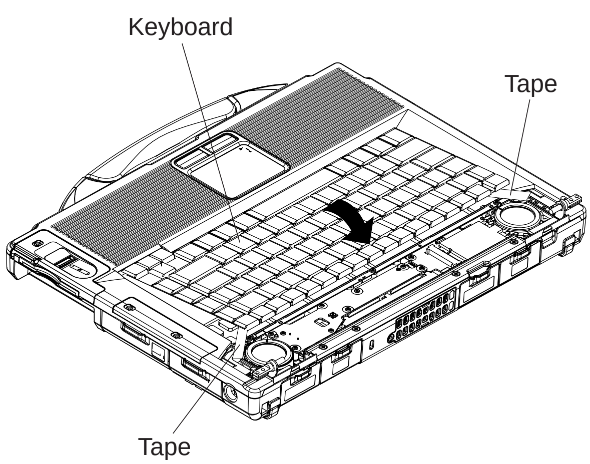
Screws <N2> : DFHE5122YA
Screw <N4> : DRHM0093ZA
Screws <N8> : DRHM5054XAT
Screws <N9> : DRHM5104ZAT
Screws <N12> : DXSB2+4FNLT
Screws <N14> : XTB26+10GJKT

9.2.17. Setting the Keyboard

1. Connect the FPCs to the Connector on the KBD FPC.
2. Place the Keyboard Lid Plate on the Top Cover, and fix it using the four Screws <N2>. No.1 to No.4

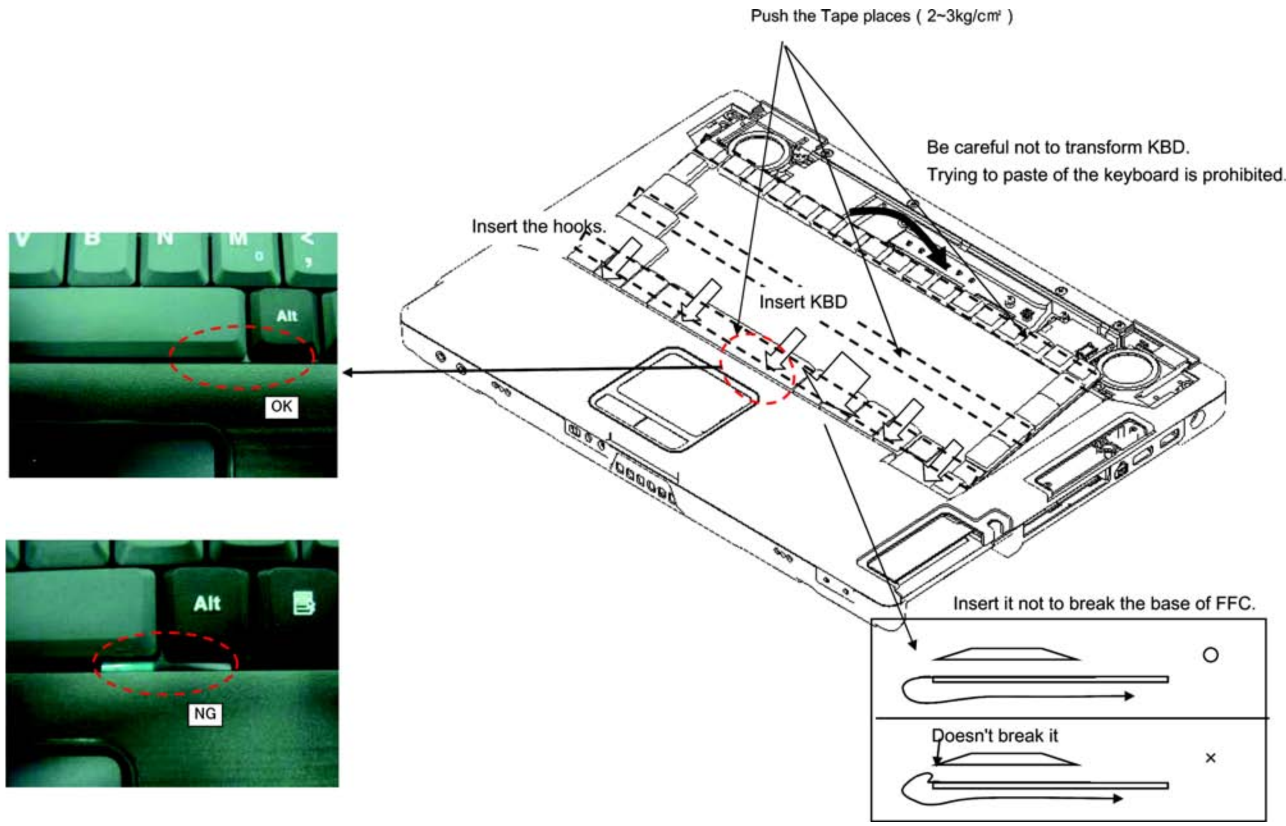


3. Place the Keyboard on the Top Cover and paste the Tapes.



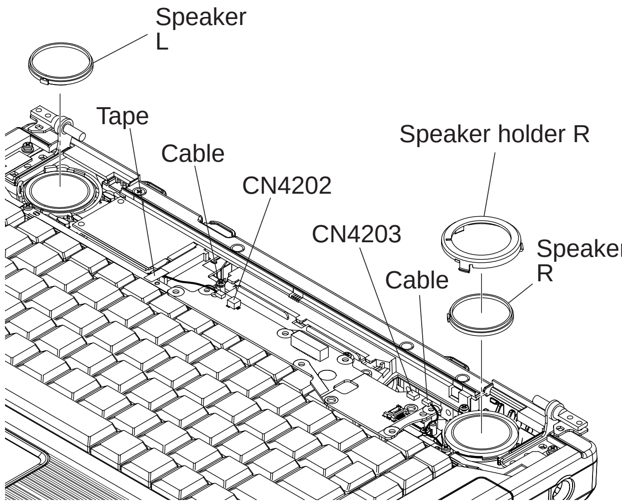
Screws <N2> : DFHE5122YA

■**Caution for when assembling the Keyboard.**



9.2.18. Setting the Speakers

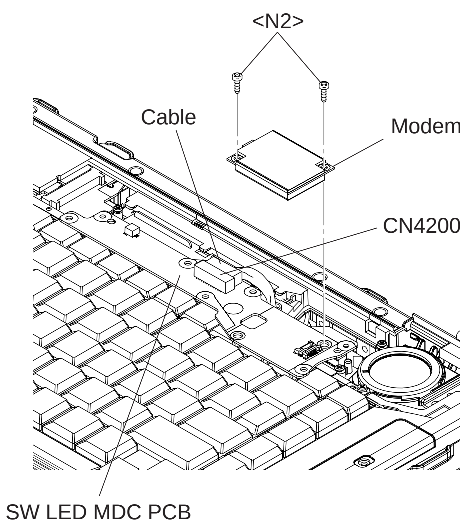
1. Place the Speakers on the computer.
2. Connect the Cables to the Connector(CN4202 and CN4203).
3. Paste the Tape on the Cable.
4. Attach the Speaker Holder R to the computer.



Note:
Do not attach the Speaker Holder L to the computer yet.

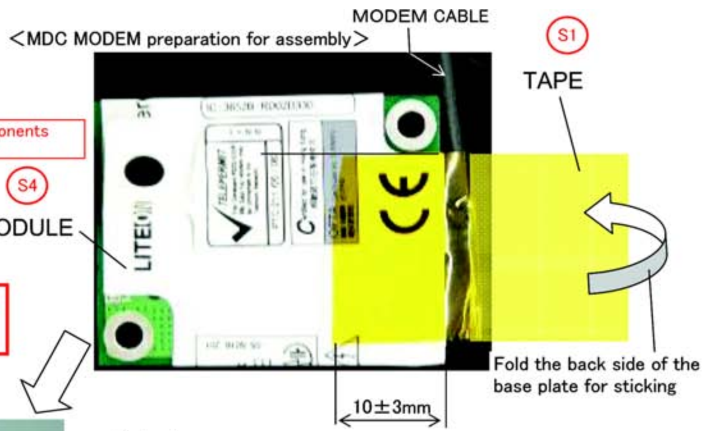
9.2.19. Setting the Modem

1. Connect the Cable to the Connector.
2. Paste the Tape2, Conductive Tape-Modem and Tape1.
3. Fix the Modem to the SW LED MDC PCB using the two Screws <N2>.



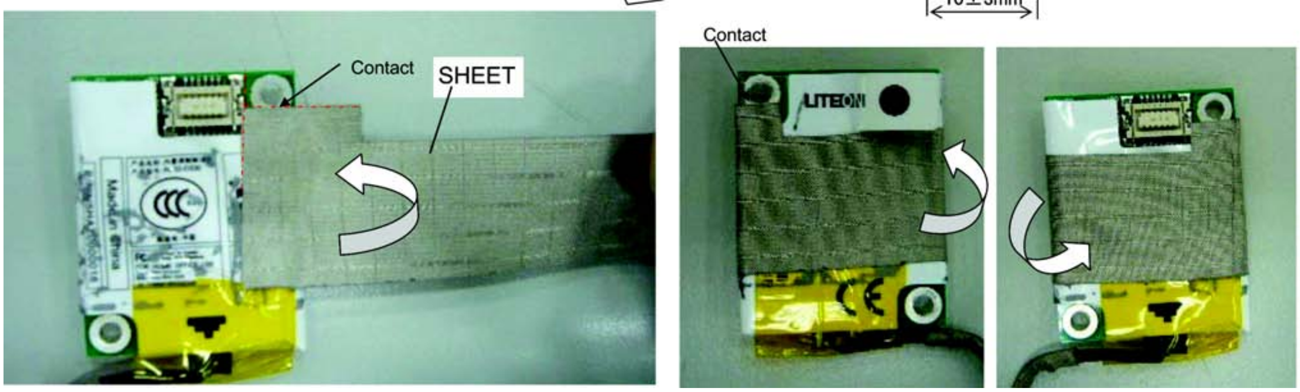
Screws <N2> : DFHE5122YA

■How to paste the Tape



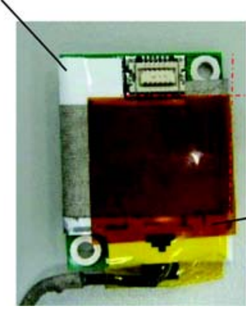
Safety Working

CAUTION	S1:Insulation S2:Pinching Cables S3:Sharp Edge S4:Part No. Check S5:Others



Safety Working

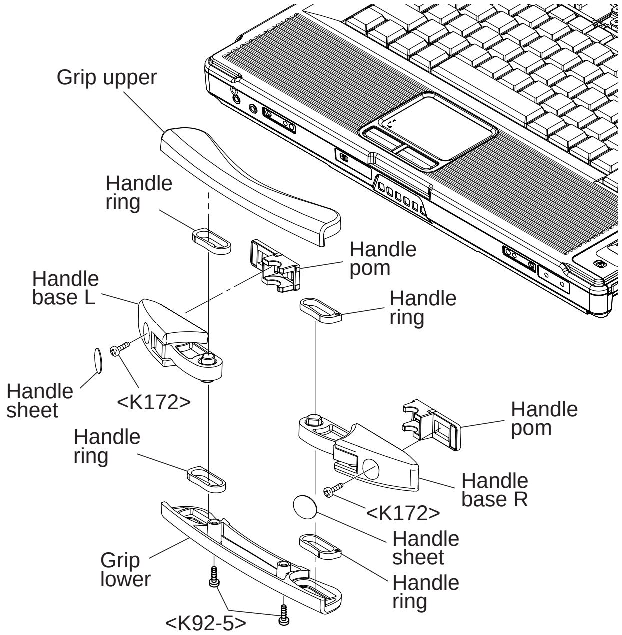
CAUTION	S1:Insulation S2:Pinching Cables S3:Sharp Edge S4:Part No. Check S5:Others



9.2.20. Setting the Handle Ass’y

1. Assemle the Handle Ass’y (Grip Upper, Grip Lower, Handle Base L, Handle Base R, Handle Ring and Handle Pom), and fix them using the two Screws <K92-5>.
2. Fix the Handle Base Ass’y to the computer using the two Screws <K172>.

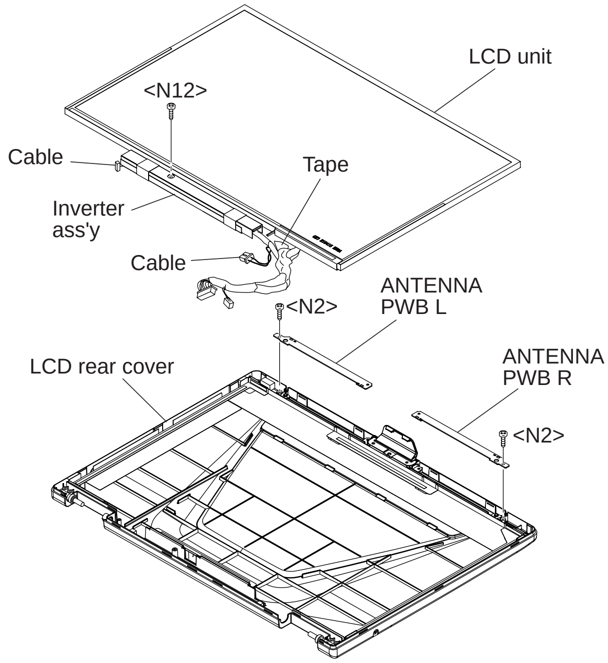
Paste the Handle Sheet on the Screws <K172>.



Screws <K92-5>: DRSB3+8FKLT
Screws <K172>: DRYN4+J12KLT

9.2.21. Setting the LCD Unit, Inverter Ass'y and Antenna PWB L, R

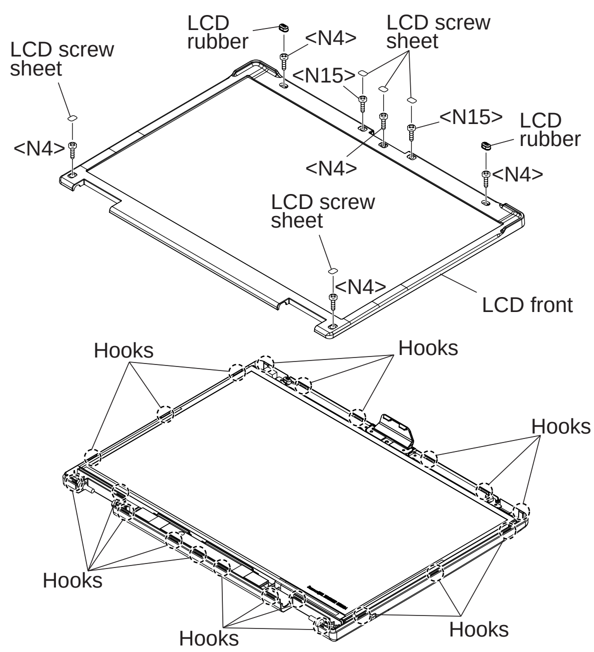
1. Set the LCD Unit to the LCD Rear Cover
2. Fix the Inverter Ass'y using the Screw <N12>.
3. Fix the Anttena PWB L and R using the Screws <N2>.



4. Place the LCD Front on the LCD Rear Case.

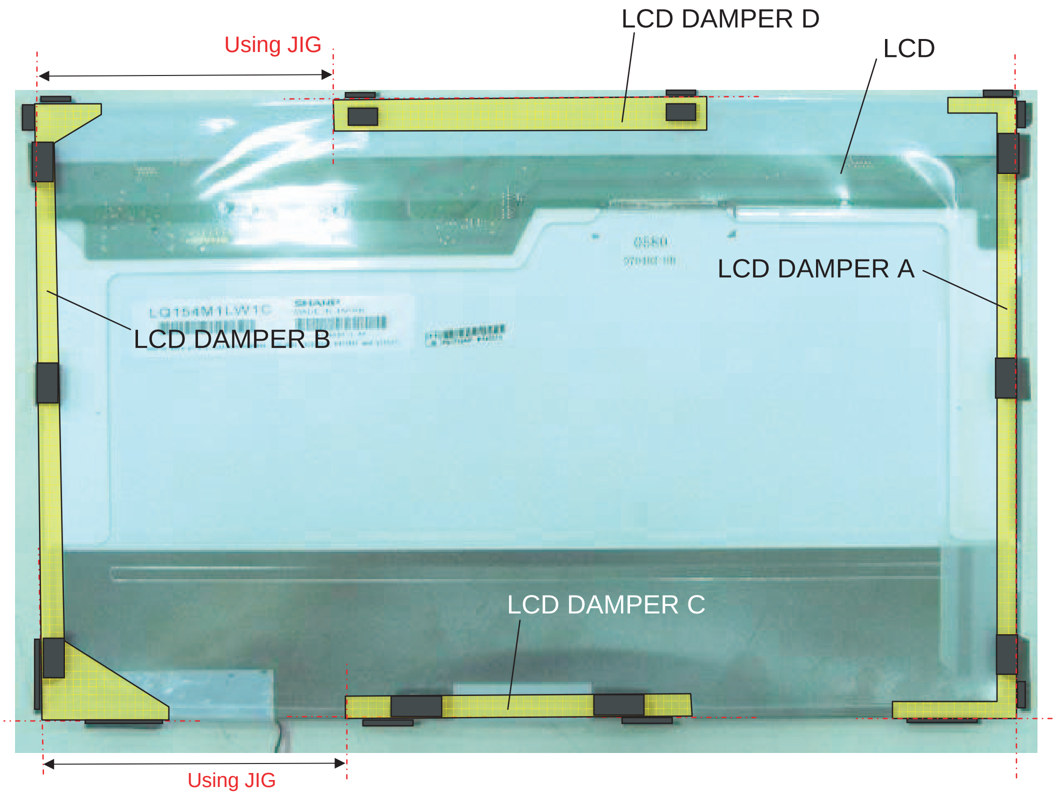
Confirm that the twenty-one Hooks are fixed perfectly.

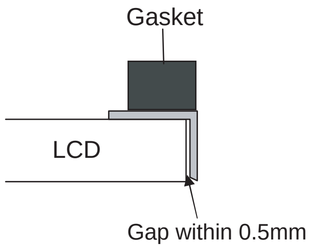
5. Fix the LCD Front using the five Screws <N4> and two Screws <N15>.
6. Paste the LCD Screw Sheet and LCD Rubber.



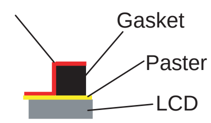
Screws <N2> : DFHE5122YA
Screw <N4> : DRHM0093ZA
Screws <N12> : DXSB2+4FNLT
Screws <N15> : XQN17+BJ6FJ

■Setting of LCD unit ass'y

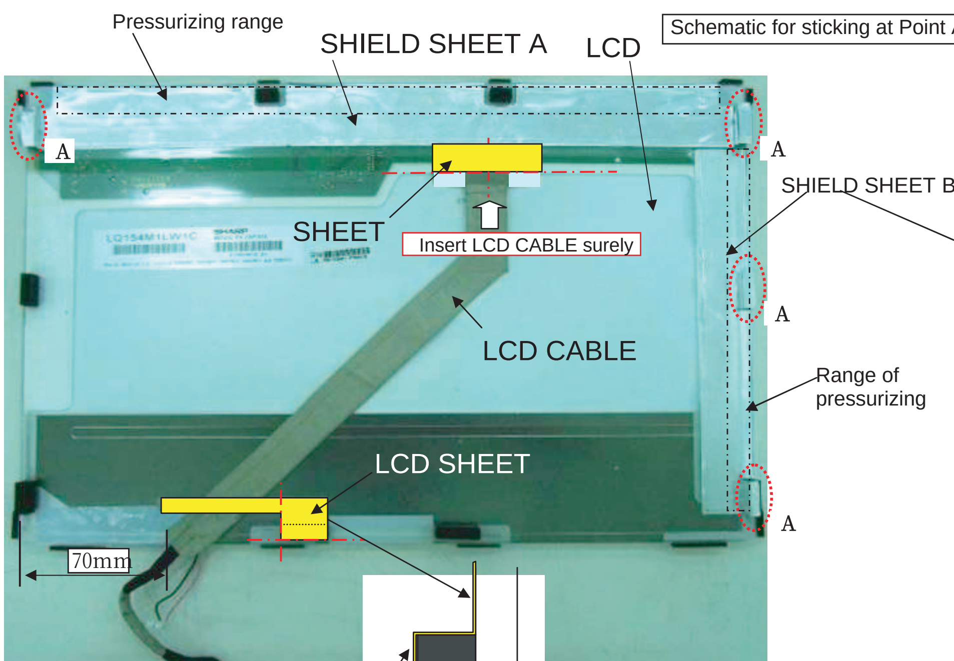


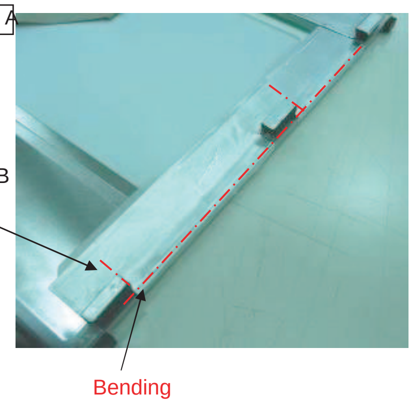


Alminium (silvery) paster is stuck on the gasket.

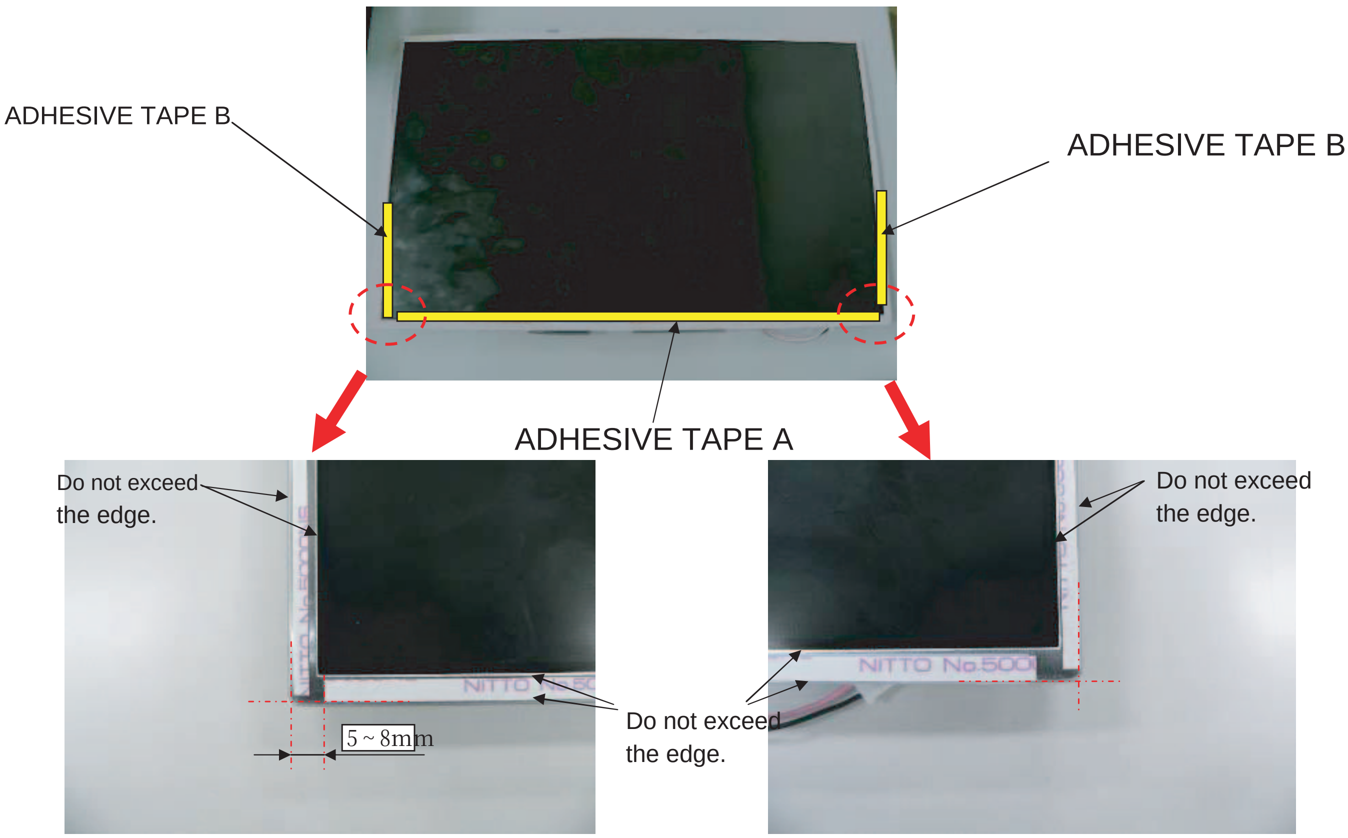


Schematic for sticking at Point A



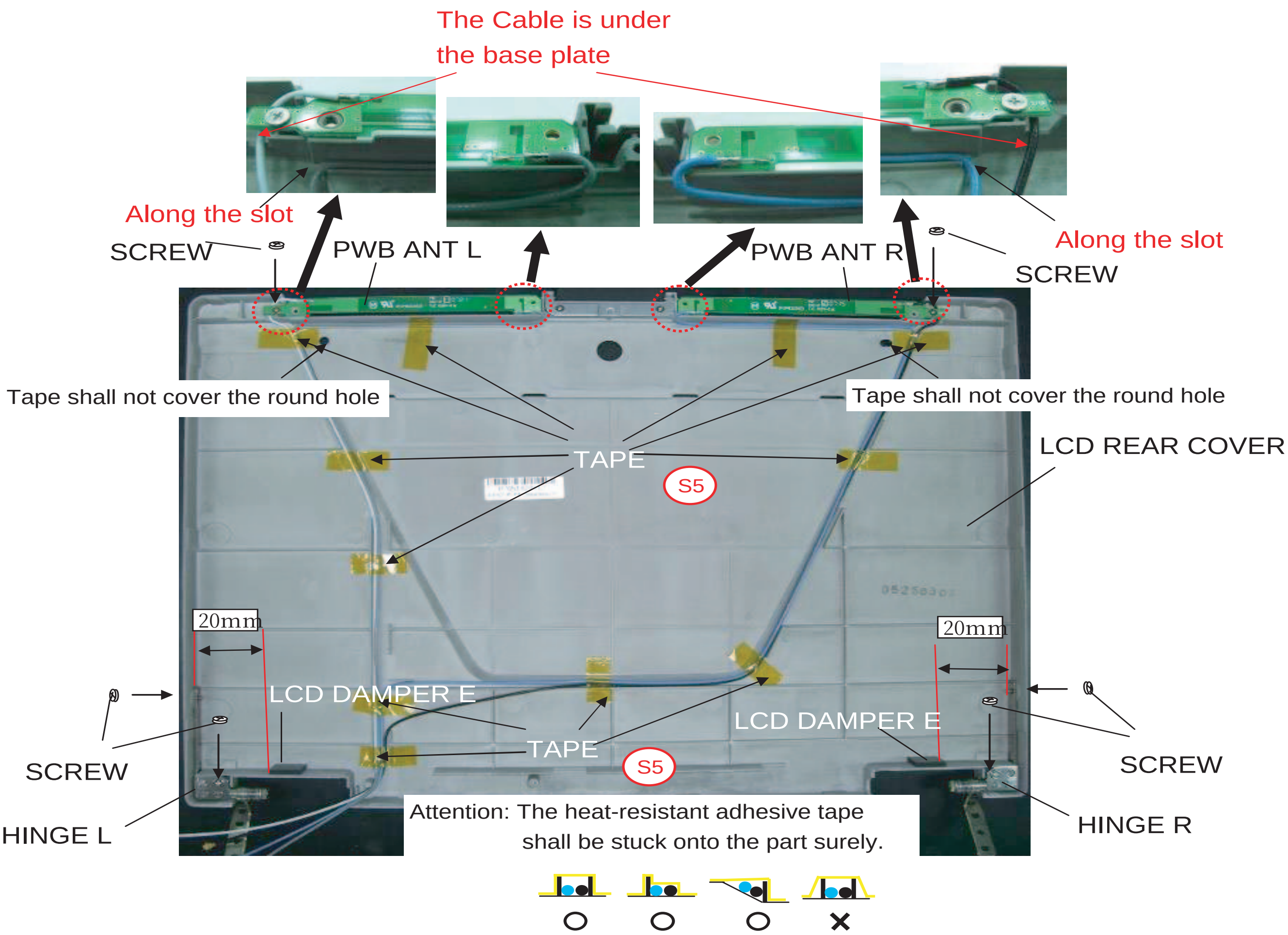


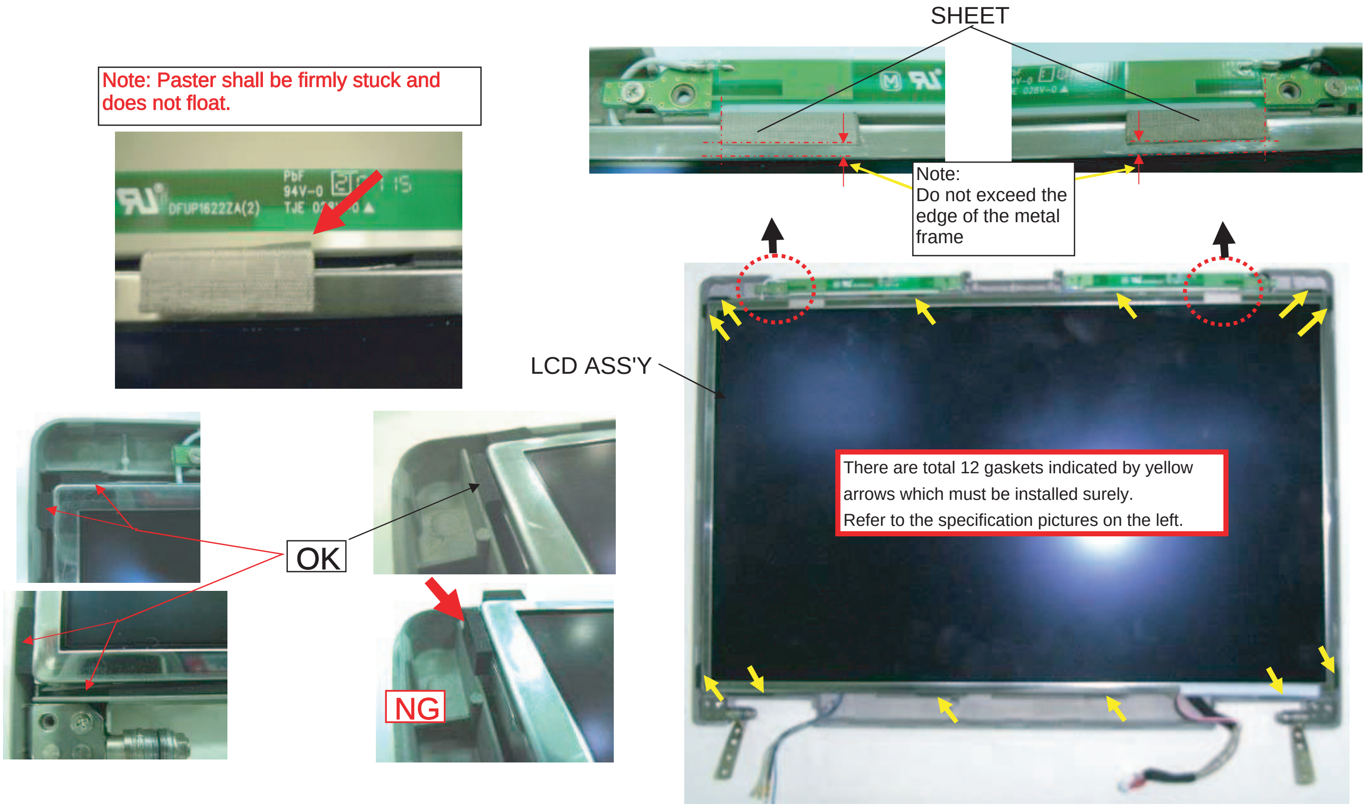
The cloth conductor shall be stuck along the gasket.

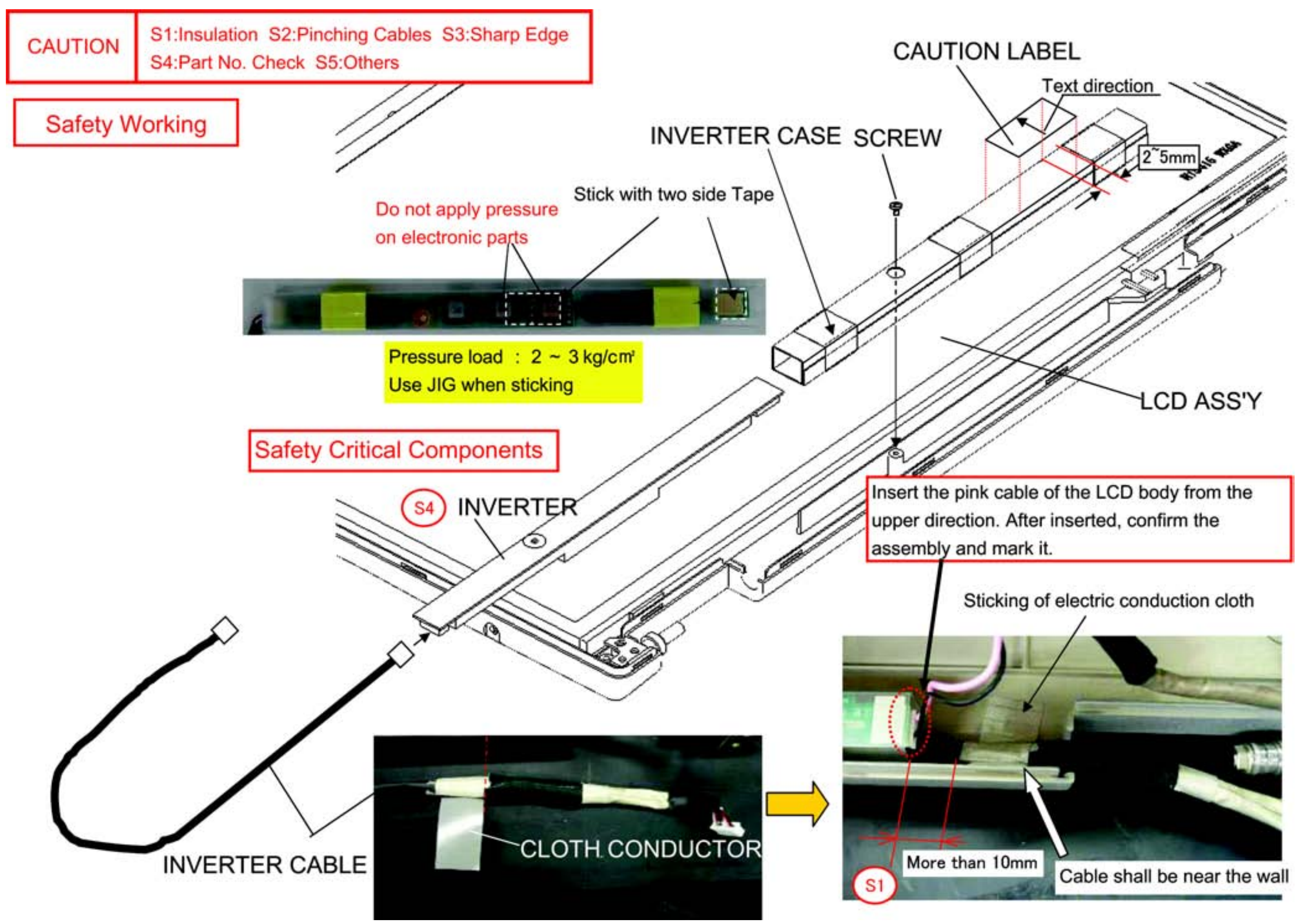

ADHESIVE TAPE B
ADHESIVE TAPE B
ADHESIVE TAPE A
Do not exceed the edge.
5 ~ 8mm
Do not exceed the edge.
Do not exceed the edge.
NITTO No.500

Safety Working

CAUTION	S1:Insulation S2:Pinching Cables S3:Sharp Edge S4:Part No. Check S5:Others

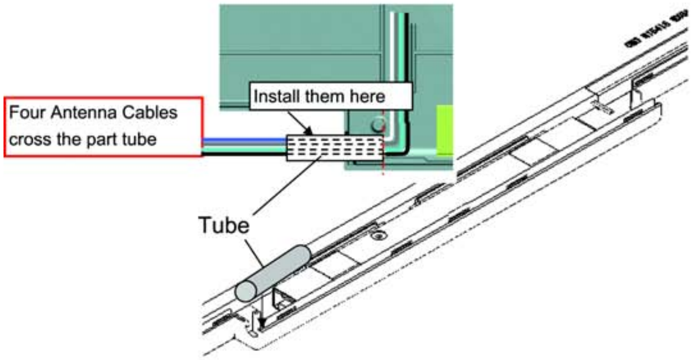


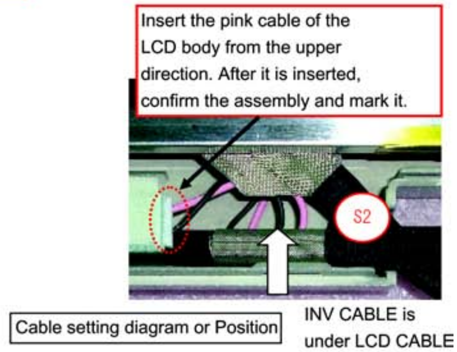

SHEET
Note: Paster shall be firmly stuck and does not float.
Note:
Do not exceed the edge of the metal frame
LCD ASS'Y
There are total 12 gaskets indicated by yellow arrows which must be installed surely.
Refer to the specification pictures on the left.
OK
NG

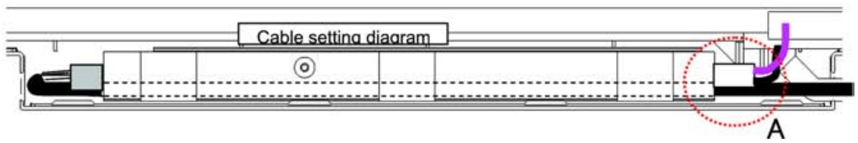

CAUTION
S1:Insulation S2:Pinching Cables S3:Sharp Edge
S4:Part No. Check S5:Others
Safety Working
CAUTION LABEL
Text direction
2~5mm
INVERTER CASE
SCREW
Stick with two side Tape
Do not apply pressure on electronic parts
Pressure load : 2 ~ 3 kg/cm²
Use JIG when sticking
LCD ASS'Y
Safety Critical Components
S4
INVERTER
Insert the pink cable of the LCD body from the upper direction. After inserted, confirm the assembly and mark it.
Sticking of electric conduction cloth
INVERTER CABLE
CLOTH CONDUCTOR
More than 10mm
S1
Cable shall be near the wall

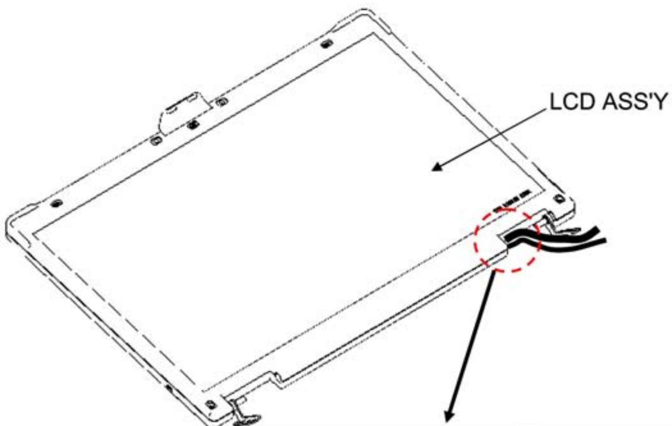
Safety Working

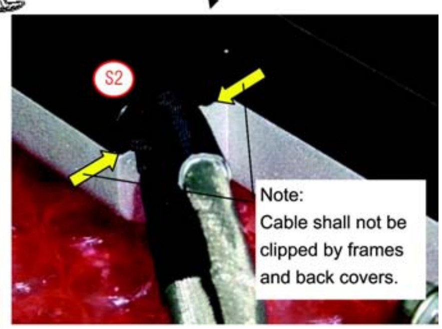
CAUTION	S1:Insulation S2:Pinching Cables S3:Sharp Edge S4:Part No. Check S5:Others









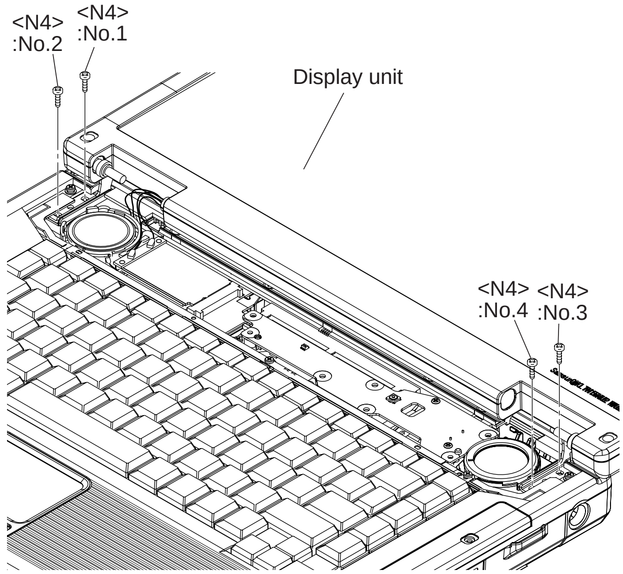


Safety Working

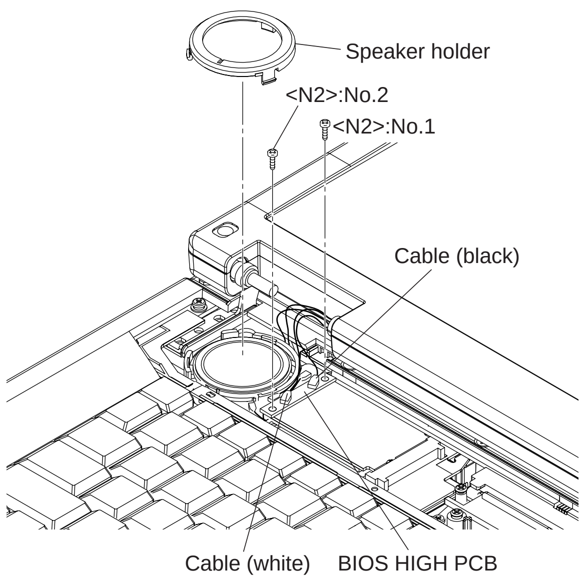
CAUTION	S1:Insulation S2:Pinching Cables S3:Sharp Edge S4:Part No. Check S5:Others

9.2.22. Setting the Display Unit, BIOS HIGH PCB and SW LED MDC PCB

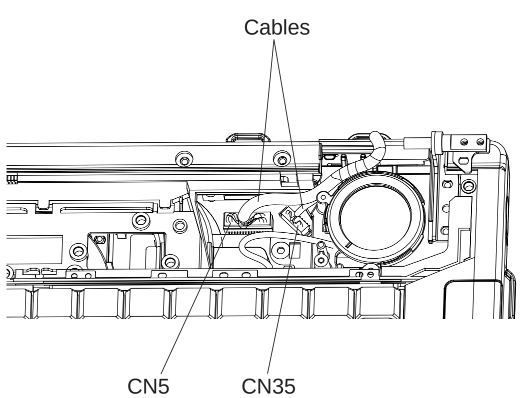
1. Set the Display Unit to the computer, and fix it using the four Screws <N4>. No.1 to No.4



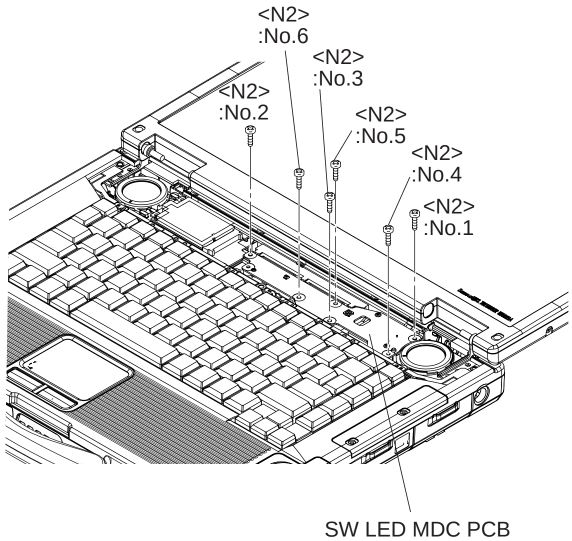
2. Connect the Cable(gray) to JK7001 and the Cable(blue) to JK7003 on WWAN PCB.
3. Set the BIOS HIGH PCB, and fix it using the two Screws<N2>. No.1, No.2
4. Connect the Cable(black) to JK6103 and the Cable(white) to JK6102 on BIOS HIGH PCB.



5. Connect the two Cables to the Connector(CN5 and CN35).

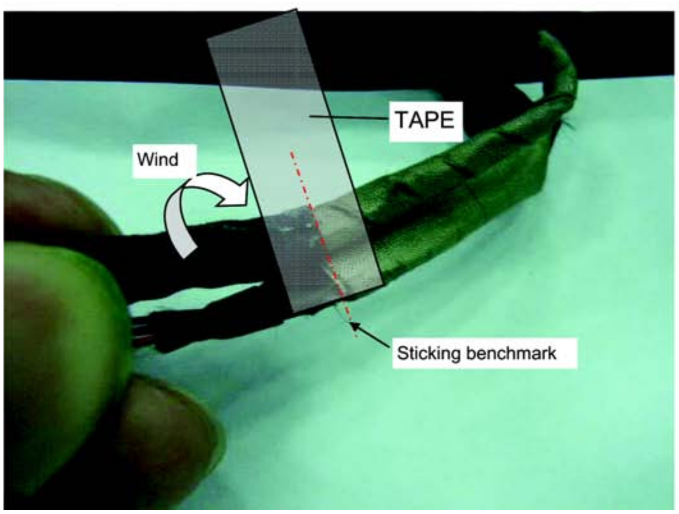


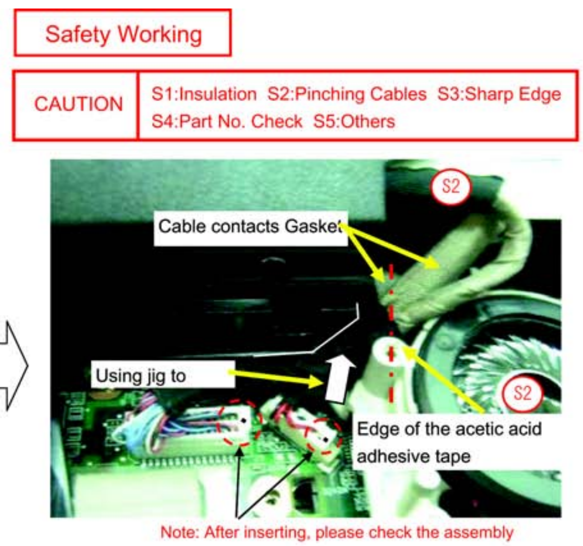
6. Fix the SW LED MDC PCB using the six Screws <N2>. No.1 to No.6



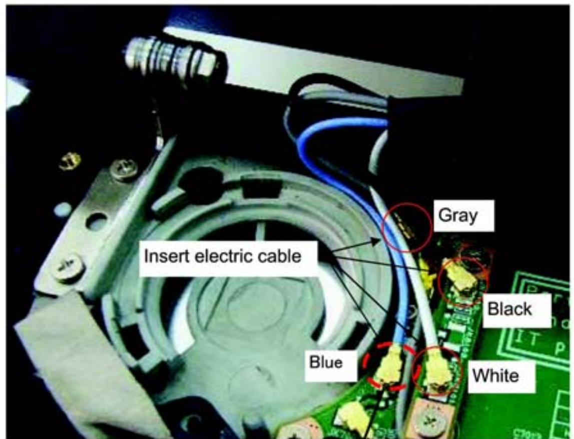
Screw<N2> : DFHE5122YA
Screw <N4> : DRHM0093ZA

■Arranging the Cables when assembling the LCD Unit.





Note: Use jig to insert and take out the cable





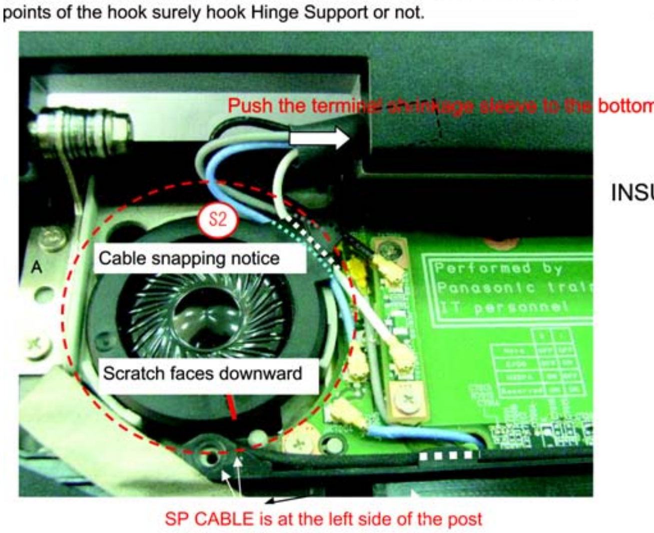
Safety Working

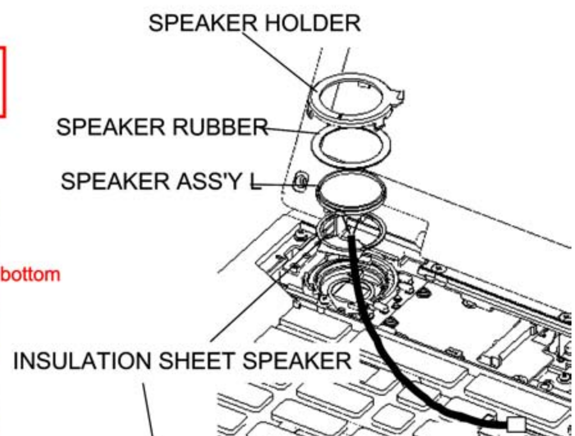
CAUTION	S1:Insulation S2:Pinching Cables S3:Sharp Edge S4:Part No. Check S5:Others

Safety Working

CAUTION	S1:Insulation S2:Pinching Cables S3:Sharp Edge S4:Part No. Check S5:Others

Note: When assembling SPEAKER HOLDER check whether the three points of the hook surely hook Hinge Support or not.

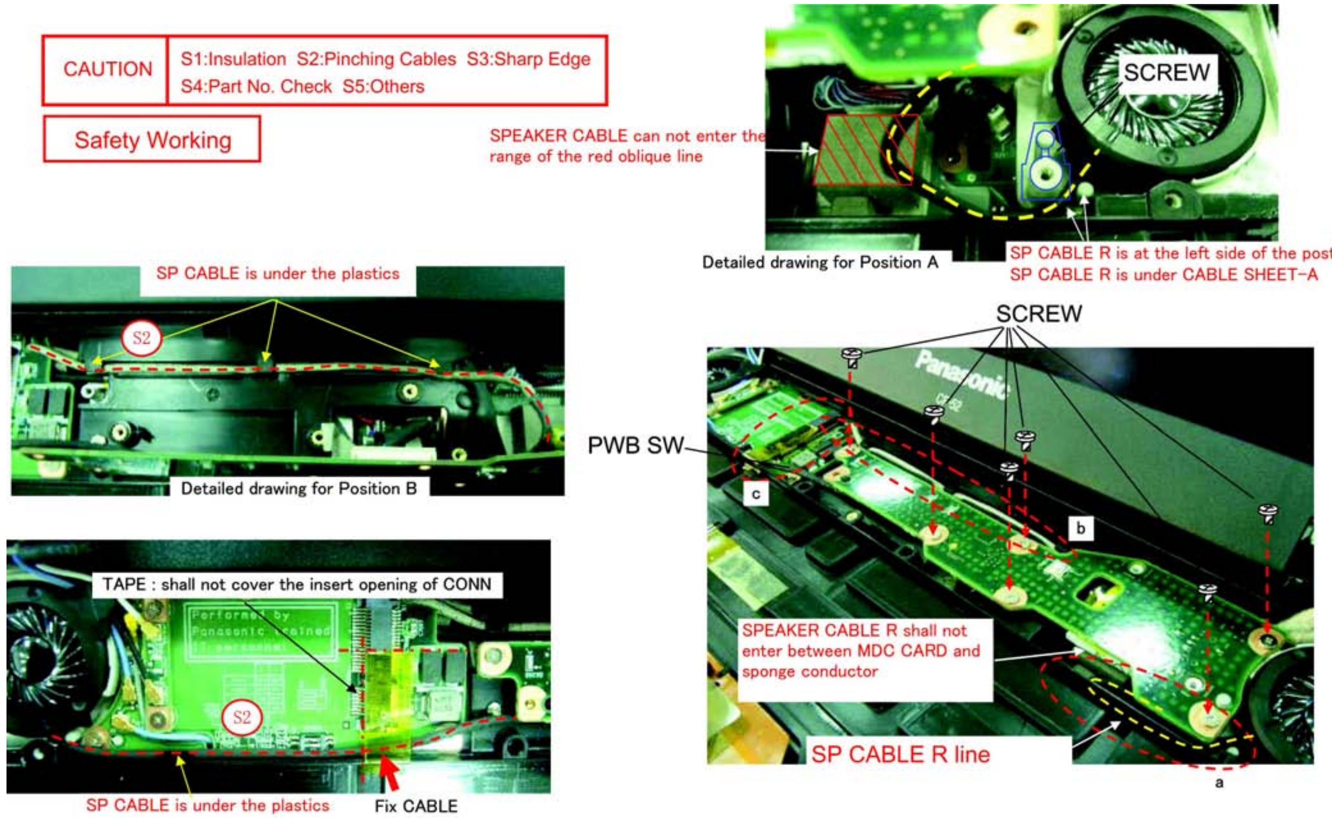




Detailed Drawing for Position A

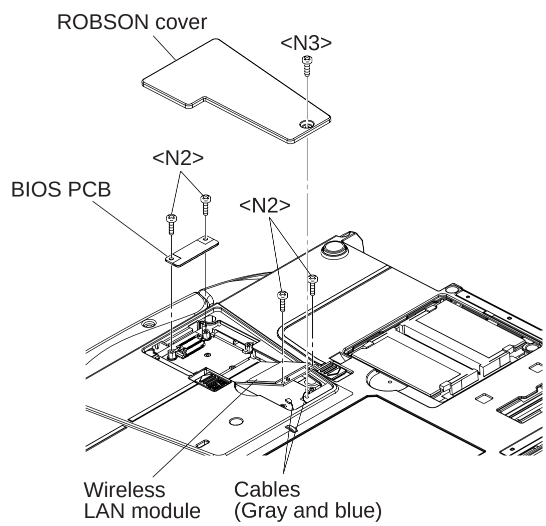


■**Arranging the Speaker Cables when assembling the SW LED MDC PCB.**



9.2.23. Setting the Wireless LAN Module, BIOS PCB and ROBSON Cover

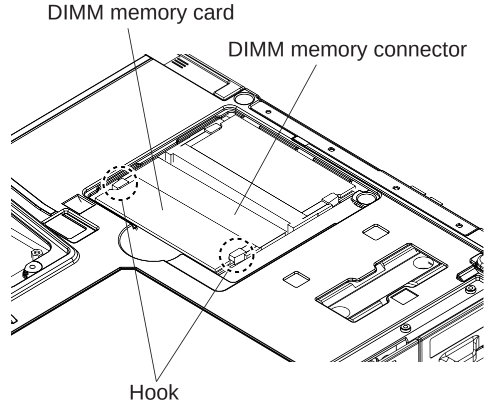
1. Put the Wireless LAN Module into the connector at an angle of fourty-five degrees.
2. Attach the BIOS PCB to the MAIN HIGH PCB, fix it using the two Screws <N2>.
3. Set the ROBSON Cover, and fix it using the Screw <N3>.



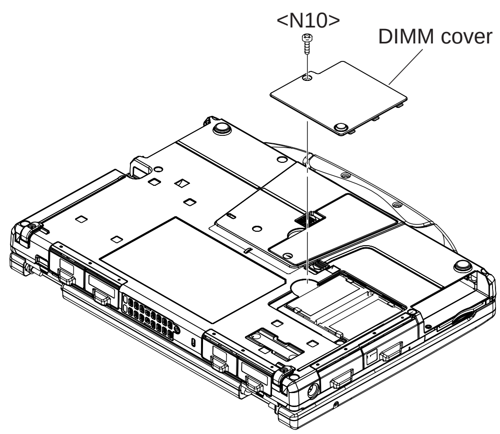
Screw <N2> : DFHE5122YA
Screw <N3> : DRHM0065ZA

9.2.24. Setting the DIMM Memory Card and DIMM Cover

1. Put the DIMM Memory Card into the connector.
2. Close the right and left Hooks, and paste the Tape.



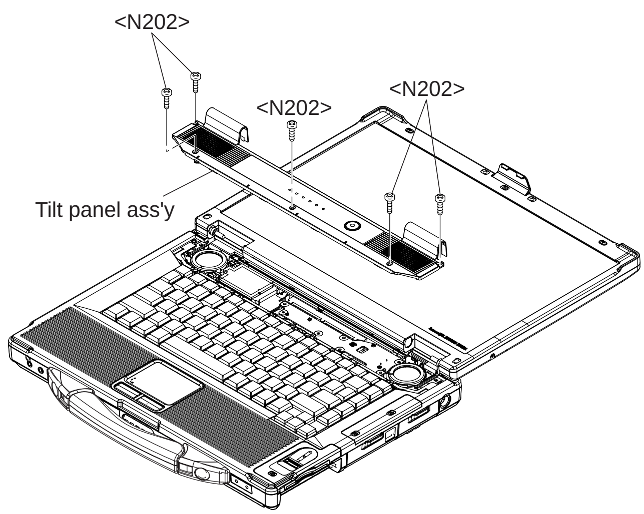
3. Set the DIMM Memory Card, and fix it using the Screw <N10>.



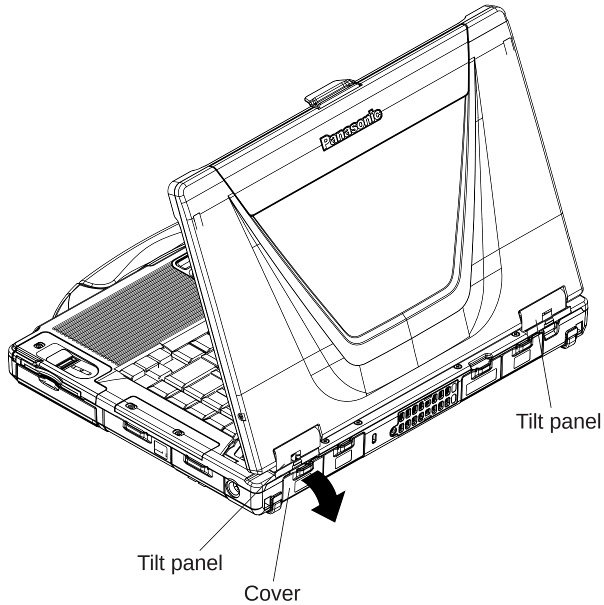
Screw <N10> : DRSB2+3FKLT

9.2.25. Setting the Tilt Panel Ass’y

1. Set the Tilt Panel Ass’y to the computer, and fix it using the five Screws <N202>.

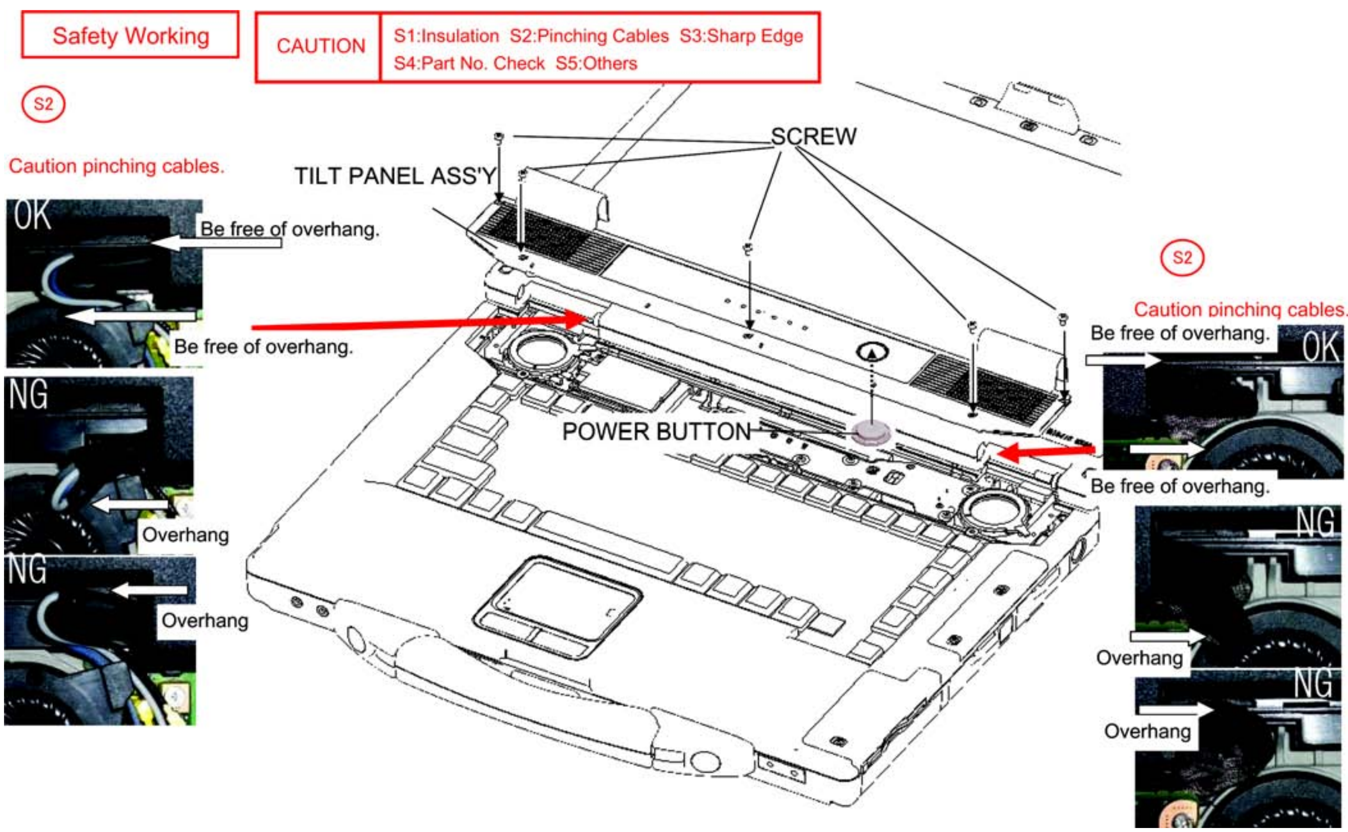


2. Open the Cover, push the Tilt Panel Ass'y into the computer until it clicks.



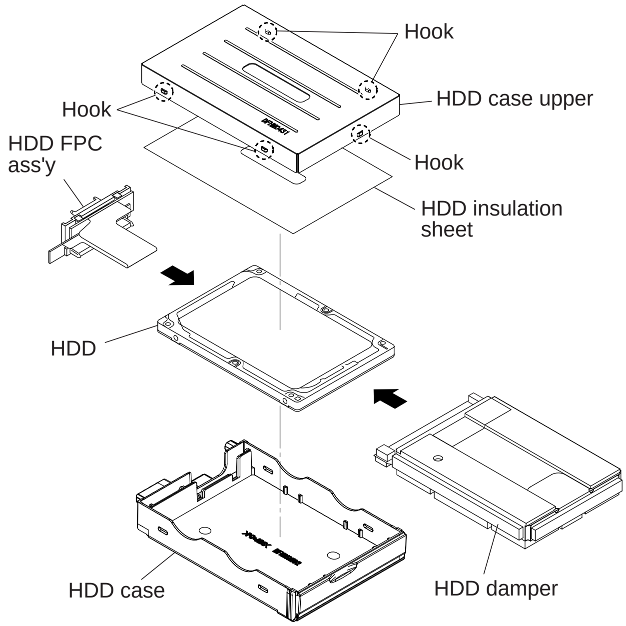
Screw <N202> : DRSB2+4FKLT

■**Caution for when assembling the Tilt Panel Ass'y**

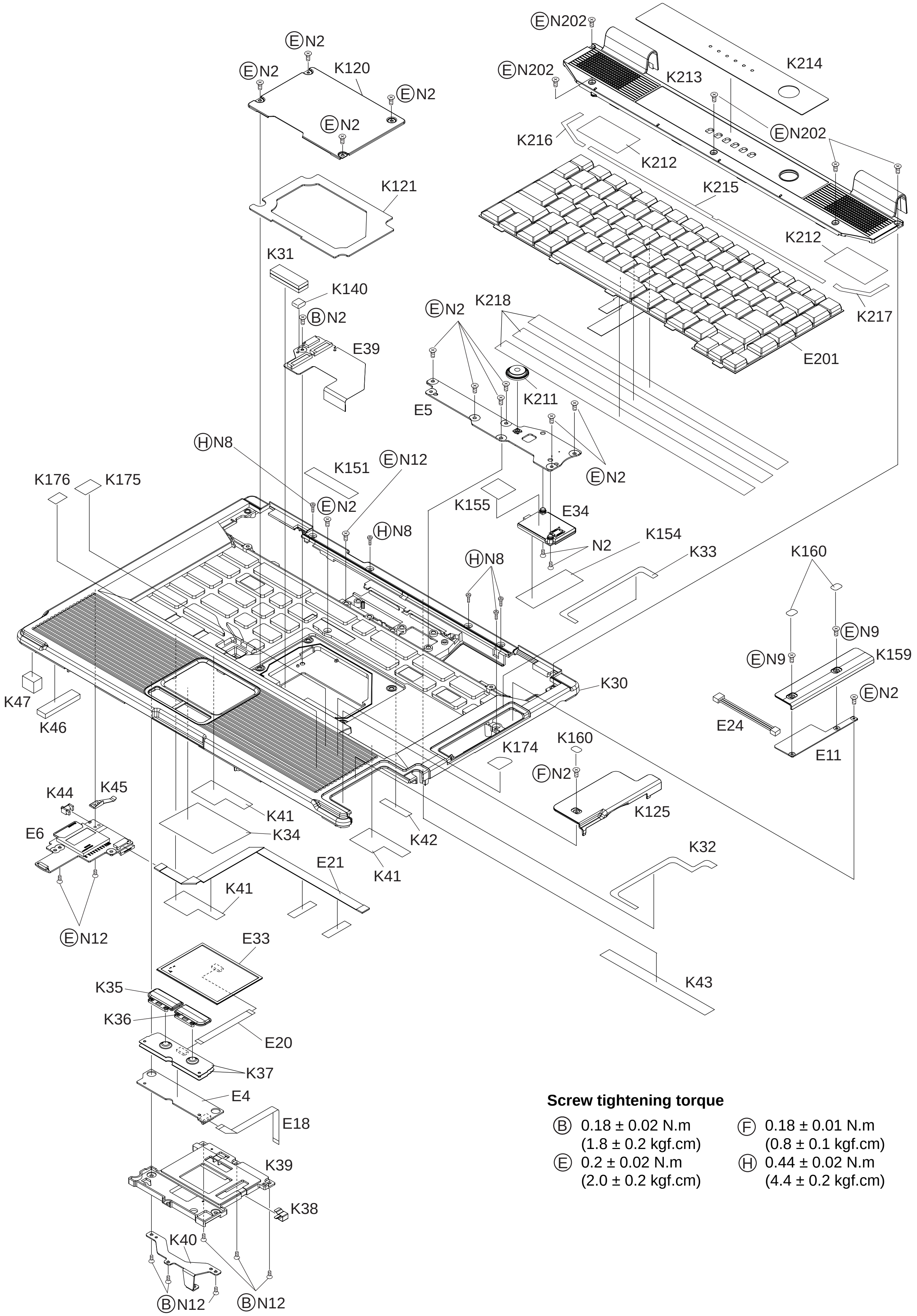


9.2.26. Setting the HDD

1. Connect the HDD FPC Ass'y to the HDD.
2. Insert the HDD Ass'y into the HDD Damper.
3. Set the HDD Ass'y into the HDD Case Upper.
4. Attach the HDD Case into the HDD Case Upper Ass'y

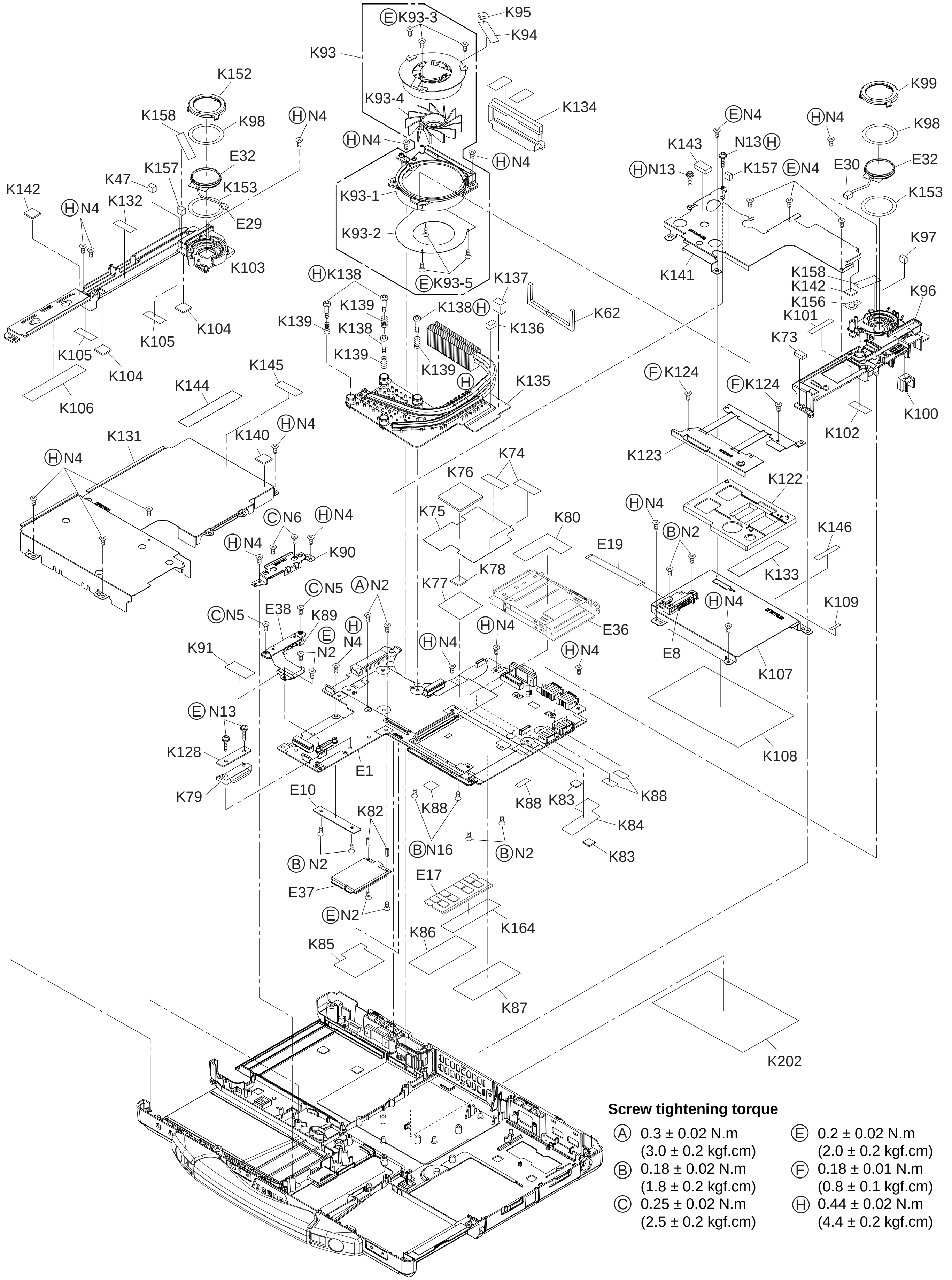


10 Exploded View



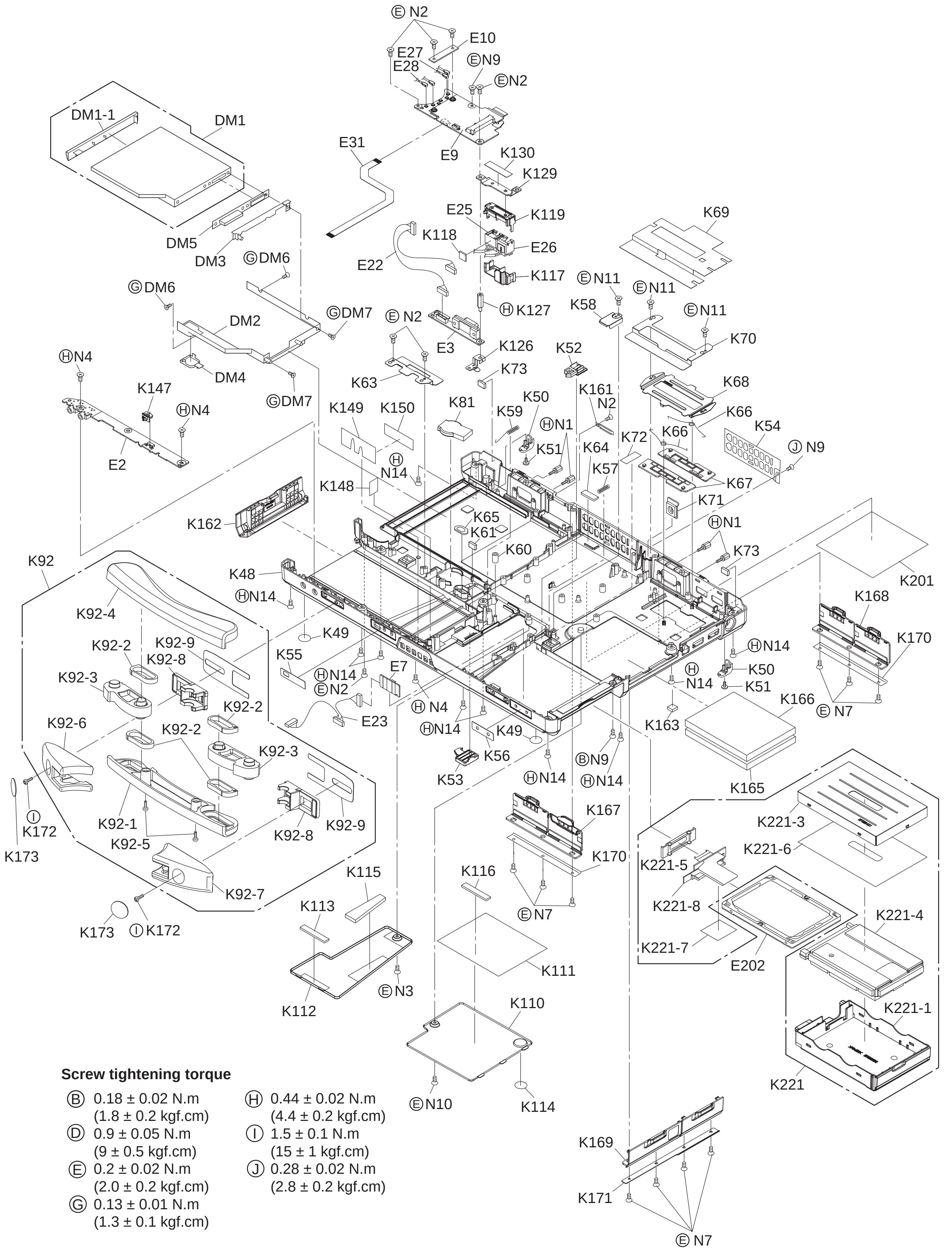
Screw tightening torque

Ⓑ	0.18 ± 0.02 N.m (1.8 ± 0.2 kgf.cm)	Ⓕ	0.18 ± 0.01 N.m (0.8 ± 0.1 kgf.cm)
Ⓔ	0.2 ± 0.02 N.m (2.0 ± 0.2 kgf.cm)	Ⓗ	0.44 ± 0.02 N.m (4.4 ± 0.2 kgf.cm)



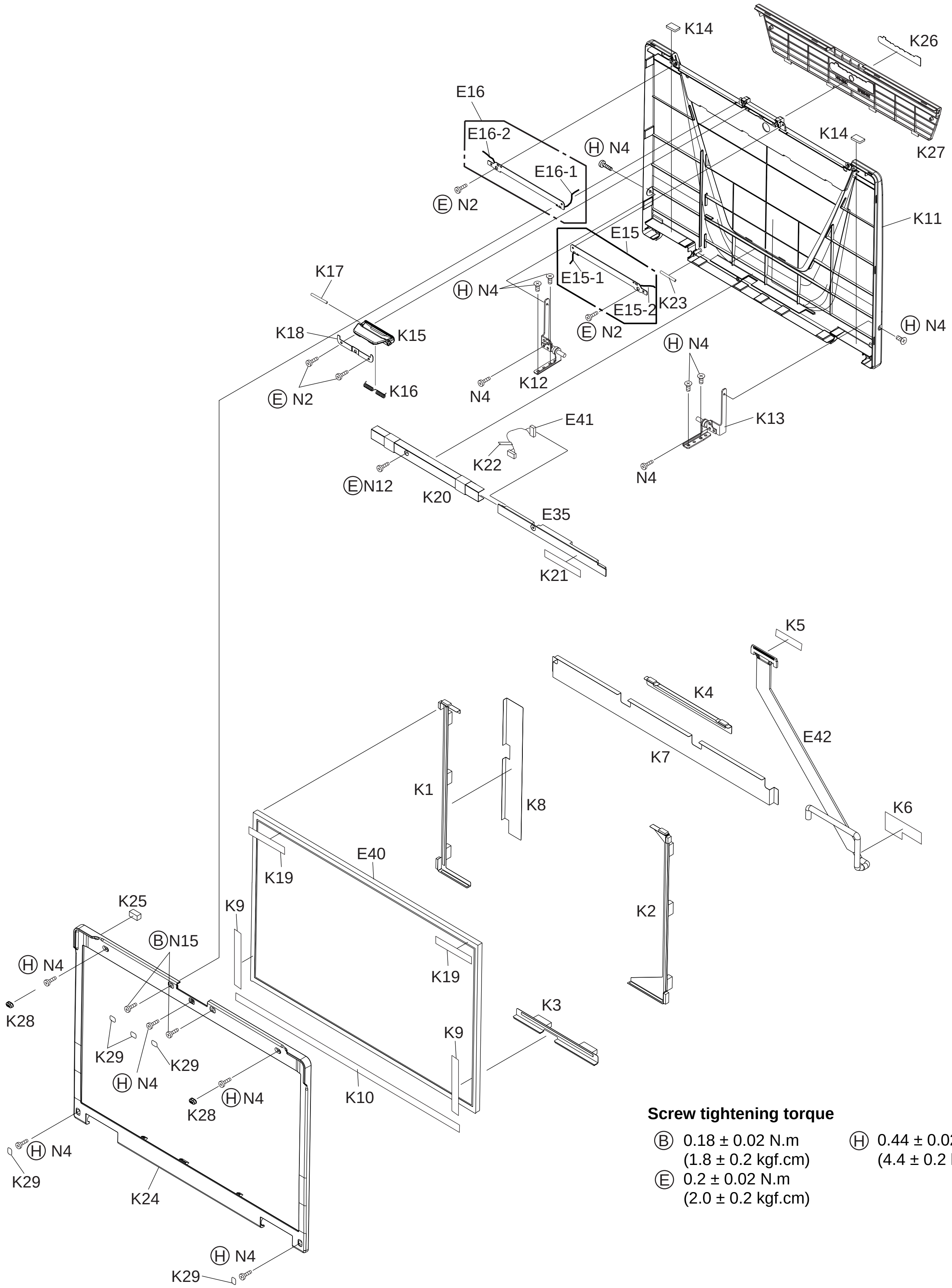
Screw tightening torque

A	0.3 ± 0.02 N.m (3.0 ± 0.2 kgf.cm)	E	0.2 ± 0.02 N.m (2.0 ± 0.2 kgf.cm)
B	0.18 ± 0.02 N.m (1.8 ± 0.2 kgf.cm)	F	0.18 ± 0.01 N.m (0.8 ± 0.1 kgf.cm)
C	0.25 ± 0.02 N.m (2.5 ± 0.2 kgf.cm)	H	0.44 ± 0.02 N.m (4.4 ± 0.2 kgf.cm)



Screw tightening torque

Ⓑ 0.18 ± 0.02 N.m (1.8 ± 0.2 kgf.cm)	Ⓗ 0.44 ± 0.02 N.m (4.4 ± 0.2 kgf.cm)
Ⓓ 0.9 ± 0.05 N.m (9 ± 0.5 kgf.cm)	Ⓘ 1.5 ± 0.1 N.m (15 ± 1 kgf.cm)
Ⓔ 0.2 ± 0.02 N.m (2.0 ± 0.2 kgf.cm)	Ⓙ 0.28 ± 0.02 N.m (2.8 ± 0.2 kgf.cm)
Ⓖ 0.13 ± 0.01 N.m (1.3 ± 0.1 kgf.cm)	



Screw tightening torque

Ⓑ 0.18 ± 0.02 N.m (1.8 ± 0.2 kgf.cm)	Ⓗ 0.44 ± 0.02 N.m (4.4 ± 0.2 kgf.cm)
Ⓔ 0.2 ± 0.02 N.m (2.0 ± 0.2 kgf.cm)	

Replacement Parts List

Note : Important Safety Notice
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

CF-52AJYZDZM

NRP: Non Reusable Parts

REF. NO and AREA		PART NO.	DESCRIPTION		Q'TY
Main Block Unit					
E1		DL3U11616AAA	PCB, MAIN HIGH	RTL	1
E2		DL3U21616AAA	PCB, AUDIO	RTL	1
E3		DL3U31616AAA	PCB, SERIAL	RTL	1
E4		DL3U41616AAA	PCB, TOUCH PAD	RTL	1
E5		DL3U51616AAA	PCB, SW LED MDC	RTL	1
E6		DL3U61616AAA	PCB, SD	RTL	1
E7		DL3U71616AAA	PCB, PWR BATTERY LED	RTL	1
E8		DL3U81616AAA	PCB, SC RELAY	RTL	1
E9		DL3U91616AAA	PCB, WWAN	RTL	1
E10		DL3UA1616AAA	PCB, BIOS HIGH	RTL	1
E11		DL3UP1621AAA	PCB, BT UNIT	RTL	1
E15		DL3U11622AAA	ANTENNA PWB R	RTL	1
E15-1		DFJS1098ZB	WLAN ANTENNA CABLE R		1
E15-2		DFJS1100ZA	WWAN ANTENNA CABLE R		1
E16		DL3U21622AAA	ANTENNA PWB L	RTL	1
E16-1		DFJS1097ZB	WLAN ANTENNA CABLE L		1
E16-2		DFJS1099ZB	WWAN ANTENNA CABLE L		1
E17		N5ZZ00000128	1GB DDR2-667 SO-DIMM		1
E18		DFJK9012YA	FFC, PAD		1
E19		DFJK9014YA	FFC, SC FS		1
E20		DFJK9024ZB	FFC, CLICK		1
E21		DFJK9025ZA	FFC SD		1
E22		DFJS1078ZA	SW LED I/O CABLE		1
E23		DFJS1079ZA	AUDIO LED SW CABLE		1
E24		DFJS1080ZA	BLUETOOTH CABLE		1
E25		DFJS1081ZB	LAN CABLE		1
E26		DFJS1082ZB	MODEM CABLE		1
E27		DFJS1095ZB	CABLE ANT RELAY WLAN L		1
E28		DFJS1096ZC	RELAY WLAN ANTENNA CABLE R		1
E29		DFJS1111ZB	SPEAKER CABLE-L		1
E30		DFJS1112ZB	SPEAKER CABLE-R		1
E31		DFUP1641ZA	FPC		1
E32		L0AA02A00080	SPEAKER		2
E33		N2EAYYY00003	PAD		1
E34	⚠	N5HAZ0000016	MODEM		1
E35	⚠	N0GF1J000011	INVERTER	NRP	1
E36		K1NB94B00002	EX/PC CARD EJECTOR		1
E37	⚠	N5HZC0000031	WIRELESS LAN MODULE		1
E38		DFWP0146ZA	BATTERY FPC ASS'Y		1
E39		DFWP0147ZB	KBD SD RELAY FPC ASS'Y		1
E40		L5EDDYY00060	LCD HIGH		1
E41		DFJS1077YA	INVERTER CABLE		1
E42		DFJS1128ZA	LCD CABLE		1
E201		N2ABZY000035	KEYBOARD VISTA US		1
E202	⚠	N3CAYYY00021	HDD		1
Accessories					
A1	⚠	DFQW5048ZBT	MANUAL(CF-52MK1 USA)		1
A2	⚠	K2CG3DR00004	AC CORD		1
A3	⚠	CF-AA1683AMA	AC ADAPTOR		1
A4	⚠	CGR-B/982AE	LITHIUM ION BATTERY PACK		1
A5		DFJS1070ZA	MODEM CABLE		1
Packing Material					
P1		DFPN0851ZAT	CUSHION T		2
P2		DFPN0852ZAT	CUSHION B		2
P3		DFPE0873ZAT	BATTERY HOLDER		1
P4		DFPE0874ZBT	MANUAL HOLDER		1

P5		DFPE0875ZCT	ACCESSORY HOLDER		1
P6		DFPK1234ZAT	PACKING CASE		1
P7		DFPH0077ZAT	PROTECTION SHEET		1
P8		DFPP0136ZAT	PROTECTION BAG		1
Mechanical Parts					
K1		DFHR3G84ZB	LCD DAMPER A	NRP	1
K2		DFHR3G85ZC	LCD DAMPER B	NRP	1
K3		DFHR3G86ZC	LCD DAMPER C	NRP	1
K4		DFHR3G87ZA	LCD DAMPER D	NRP	1
K5		DFMC0770ZA	CONDUCTIVE TAPE	NRP	1
K6		DFHE1071ZB	CONDUCTIVE TAPE	NRP	1
K7		DFMC0889ZA	SHIELD SHEET A	NRP	1
K8		DFMC0890ZA	SHIELD SHEET B	NRP	1
K9		DFHR3J68ZA	ADHESIVE TAPE-B	NRP	2
K10		DFHR3J67ZA	ADHESIVE TAPE-A	NRP	1
K11	⚠	DFKF0281YA-0	LCD REAR COVER		1
K12		DFBH1184ZB	HINGE L		1
K13		DFBH1185ZB	HINGE R		1
K14		DFHR3J72ZA	LCD DAMPER E	NRP	2
K15	⚠	DFKE0900ZA-0	LCD LATCH		1
K16		DFUN0086ZA	LCD_LATCH_SPRING		1
K17		DFDF5026ZA	LCD LATCH SHAFT		1
K18		DFMD7B37ZA	LATCH HOLD PLATE		1
K19		DFHE1068ZB	CONDUCTIVE TAPE-20X20	NRP	2
K20		DFMX1282ZC	INVERTER CASE	NRP	1
K21		DFQT6077YAT	CAUTION LABEL(INVERTER)	NRP	1
K22		DFHE1067ZA	CONDUCTIVE TAPE-10X30	NRP	1
K23		DFHR6358ZA	TUBE		1
K24	⚠	DFKM0535ZE-0	LCD FRONT		1
K25		DFHE0893ZA	LID MAGNET	NRP	1
K26		DFGB0131YA-0	PANASONIC BADGE	NRP	1
K27		DFGX0482ZC-0	ANTENNA COVER		1
K28		DFHG2009ZA-0	LCD RUBBER	NRP	2
K29		DFGX0283ZA-1	LCD SCREW SHEET	NRP	5
K30	⚠	DFKA0062ZC-0	TOP CASE		1
K31		DFHR3G01ZA	KB WATER PROOF B	NRP	1
K32		DFHR3G79ZB	WATER PROOF SC	NRP	1
K33		DFHR3G80ZB	WATER PROOF BT	NRP	1
K34		DFHR3H76ZA	PAD WP SHEET	NRP	1
K35		DFBC0324ZA-0	CLICK BUTTON L		1
K36		DFBC0325ZA-0	CLICK BUTTON R		1
K37		DFHR3H74ZA	PAD BUTTON WP SHEET		2
K38		DFMC0797ZA	EARTH PLATE		1
K39		DFHR6327ZA	PAD HLDER		1
K40		DFMD7B36ZA	TOP RELAY PLATE		1
K41		DFHR3H38ZA	KBD WATER PROOF SHEET A	NRP	3
K42		DFMC0613ZAT	CONDUCTIVE TAPE-10X39	NRP	1
K43		DFHR3H50ZA	FIN DUCT B	NRP	1
K44		DFHR6324ZA	SD LED LENZ		1
K45		DFMC0852ZA	SD EARTH PLATE		1
K46		DFHR3J91ZA	CUSHION-E	NRP	1
K47		DFHR3J90ZA	CUSHION-D	NRP	2
K48	⚠	DFKM0534ZC-0	BOTOTM CASE		1
K49		DFHG2035ZA-0	FOOT RUBBER	NRP	2
K50		DFHG1976ZB-0	LEG		2
K51		DRHM0130ZAT	SCREW (CANCELLED 2007/7/12 BY KAWADA)		2
K52		DFBD0178ZA-0	LOCK KNOB(HDD)		1
K53		DFBD0196ZA-0	BATTERY LATCH KNOB		1
K54		DFHR6331ZC	FIN COVER		1
K55		DFHR3H19ZB	WL SHEET	NRP	1
K56		DFHR3H20ZC	LED SHEET	NRP	1
K57		DFUQ0105ZA	LOCK SPRING HDD		1
K58		DFMD7B45ZA	HDD LOCK COVER PLATE		1
K59		DFUD0043ZB	BATTERY LATCH SPRING		1
K60		DFHG2033ZA	SPACER CUSHION		1
K61		DFHE1064ZA	GASKET-3X3X10	NRP	1

K62		DFHR3G78ZA	FIN DUCT	NRP	1
K63		DFMC0895ZA	EARTH PLATE PORTRE		1
K64		DFHE1061ZA	GASKET-6-6-20	NRP	1
K65		DFHR3G83ZA	BOTTOM WP CUSHION	NRP	1
K66		DFUN0056ZA	PORT RE COVER SPRING		2
K67	⚠	DFKE0555YA-0	PORTRE COVER		2
K68		DFME0138ZA	SHUTTER HOLD PLATE		1
K69		DFMX1294ZB	INSULATION SHEET POTORE	NRP	1
K70		DFMC0804ZB	EARTH PLATE PORTRE L		1
K71		DFMD9098ZC	KENGSINTONG PLATE ASS'Y		1
K72		DFHR3J14ZA	PORTRE SHEET	NRP	1
K73		DFHR3J88ZA	CUSHION-B	NRP	3
K74		DFMY0258YA	CPU THERMAL SHEET 2		2
K75		DFMX1317ZA	INSULATION SHEET VGA	NRP	1
K76		DFMY0467ZA	VGA THERMAL RUBBER		1
K77		DFHR3F89ZA	MCH SHEET	NRP	1
K78		DFMY0466ZA	MCH THERMAL RUBBER		1
K79		DFHR9122ZA	HDD GUIDE ASS'Y		1
K80		DFHR3K04ZA	SPACER	NRP	1
K81	⚠	CR2032/S5Z	BATTERY		1
K82		DFHD04H006ZA	HEX SPACER 46		2
K83		DFMY0468ZA	LAN THERMAL RUBBER		2
K84		DFMY3248ZA	VRAM THERMAL SHEET	NRP	1
K85		DFMX1316ZA	INSULATION SHEET HDD HOLDER	NRP	1
K86		DFHR3E46ZA	PROTECTION SHEET	NRP	1
K87		DFHR3E47ZB	PROTECTION SHEET	NRP	1
K88		DFHR3H85ZA	PWB SPACER	NRP	4
K89		DFHR6289ZA	BAT CON HOLDER		1
K90		DFMD7B27ZA	BATT FPC PLATE		1
K91		DFMX1308ZC	INSULATION SHEET FPC	NRP	1
K92	⚠	DFKE9094ZA-0	HANDLE ASS'Y		1
K92-1	⚠	DFKE0829ZA-0	GRIP LOWER		1
K92-2		DFHR6223ZA	HANDLE RING		4
K92-3	⚠	DFKE0899ZA-0	HANDLE JOINT		2
K92-4	⚠	DFKE0828ZA-0	GRIP UPPER		1
K92-5		DRSB3+8FKLT	SCREW		2
K92-6	⚠	DFKE0904ZA-0	HANDLE BASE L		1
K92-7	⚠	DFKE0905ZA-0	HANDLE BASE R		1
K92-8		DFHR6330ZA	HANDLE POM		2
K92-9		DFHR3J00ZA	HANDLE SPACER	NRP	2
K93		DFMY9035ZA	FAN CASE ASS'Y		1
K93-1		DFMY3244ZA	FAN CASE		1
K93-2		DFMY3245ZA	FAN CASE PLATE		1
K93-3		DXSB2+4FNLT	SCREW		3
K93-4		UDQF2ZH37	FAN		1
K93-5		DFHE5122YA	SCREW		3
K94		DFHE1067ZA	CONDUCTIVE TAPE-10X30	NRP	1
K95		DFHE0128YAT	GASKET-65TSV10-5-10	NRP	1
K96		DFME0157ZC	HINGE SUPPORT R		1
K97		DFHE1054ZB	GASKET-65TSV6-6-12	NRP	1
K98		DFHG1978ZA	SPEAKER RUBBER		2
K99		DFHR6319ZB	SPEAKER HOLDER		1
K100		DFKW0001ZB	DC JACK COVER		1
K101		DFHR3J79ZA	BT SHEET	NRP	1
K102		DFHR3K05ZA	SPACER	NRP	1
K103		DFME0156ZD	HINGE SUPPROT L		1
K104		DFHR3J83ZA	MP HOLD SHEET-2	NRP	2
K105		DFHR3J66ZB	MP SPACER	NRP	2
K106		DFHR3J92ZA	SHEET-2	NRP	1
K107		DFMD7B29ZC	HDD HOLD PLATE		1
K108		DFHR3H88ZA	HDD SHEET B	NRP	1
K109		DFHR3J69ZA	HDD PROTECT SHEET	NRP	1
K110		DFMD7B28ZB-0	DIMM COVER		1
K111		DFMX1288ZB	INSULATION SHEET DIMM	NRP	1
K112		DFMD7B32ZB-0	ROBSON COVER		1
K113		DFHE1053ZA	GASKET-65TSV3-3-20	NRP	1

K114		DFHG2034ZB-0	FOOT RUBBER	NRP	1
K115		DFHE1089ZA	GASKET-3-3-65	NRP	1
K116		DFHE1088ZA	GASKET-65TSV2.5-1.5-20	NRP	1
K117		DFHR6342ZB	MODELAN HOLDER-1		1
K118		DFMX1311ZA	INSULATION SHEET LAN	NRP	1
K119		DFHR6343ZB	MODELAN HOLDER-2		1
K120		DFHM0430ZA	KBD LID PLATE		1
K121		DFHR3G76ZB	KBD LID SHEET	NRP	1
K122		DFHR6344ZB	SC EJECTER DUMMY		1
K123		DFMD7B33ZC	SMART CARD HOLDER		1
K124		DXHM0040ZA	SCREW		2
K125		DFGX0487ZD-0	COVER DUMMY		1
K126		DFMC0884ZA	EARTH PLATE MP		1
K127		DFHD14H001ZA	HEX SPACER (13.6)		1
K128		DFHG6034ZB	MP GUIDE		1
K129		DFMD7B57ZA	MODEM PLATE		1
K130		DFMX1297ZA	INSULATION SHEET SIM	NRP	1
K131		DFMD7B31ZB	MP HOLD PLATE		1
K132		DFHR3J84ZA	MP CUSHION	NRP	1
K133		DFHR3H87ZA	HDD SHEET A	NRP	1
K134		DFHR6318ZA	FAN DUCT		1
K135		DFMY5043ZA	HEAT SINK ASS'Y		1
K136		DFHE0854ZAT	GASKET-65TSV6-6-10	NRP	1
K137		DFHE1097ZA	GASKET-65TSV10-13-15	NRP	1
K138		DRHM0119ZAT	SCREW (CANCELLED 2007/7/12 BY KAWADA)		4
K139		DFUQ0117ZA	HEAT SINK SPRING		4
K140		DFHE0284YAT	GASKET-10-4-10	NRP	2
K141		DFHM0426ZA	KBD EARTH PLATE		1
K142		DFHE1062ZA	GASKET-10X1X10	NRP	2
K143		DFHE1063ZA	GASKET-10X5X15	NRP	1
K144		DFMX1309ZB	INSULATION SHEET FPC2	NRP	1
K145		DFHE1076ZA	CONDUCTIVE TAPE-30X80	NRP	1
K146		DFHE1078ZA	CONDUCTIVE TAPE HDD	NRP	1
K147		DFHR6328ZA-0	WL BUTTON		1
K148		DFMX1139ZA	PROTECTION SHEET	NRP	1
K149		DFGM0011ZA	BOTTOM MESH PLATE		1
K150		DFHE1057ZB	CONDUCTIVE TAPE-7X35	NRP	1
K151		DFHR3H62ZA	TOP WATERPROOF SHEET	NRP	1
K152		DFHR6357ZB	SPEAKER HOLDER L		1
K153		DFMX1298ZA	INSULATION SHEET SPEAKER	NRP	2
K154		DFHE1096ZA	CONDUCTIVE TAPE-MODEM	NRP	1
K155		DFMX1333ZA	INSULATION SHEET	NRP	1
K156		DFHR3J70ZB	CABLE SHEET-A		1
K157		DFMC0766YBT	GASKET-6-8-8	NRP	2
K158		DFHE1072ZA	CONDUCTIVE TAPE-9X60	NRP	2
K159		DFGX0484ZD-0	COVER BT		1
K160		DFGX0283ZA-1	LCD SCREW SHEET	NRP	3
K161		DFMD7B60ZA	SIM COVER PLATE		1
K162		DFGX0483ZC-0	COVER BATTERY		1
K163		DFHE1077ZA	GASKET 6-6-6	NRP	1
K164		DFMX1334ZA	DIMM SHEET	NRP	1
K165		DFHR6340ZA-0	DUMMY PC CARD		1
K166		DFHR6339ZA-0	DUMMY EXPRESS CARD		1
K167		DFGX0486ZC-0	COVER IO-L		1
K168		DFGX0497ZC-0	COVER IO-R		1
K169		DFGX0488ZC-0	COVER PC CARD		1
K170		DFHM0424ZB-0	IO COVER PLATE		2
K171		DFHM0427ZC-0	PC COVER PLATE		1
K172		DRYN4+J12KLT	SCREW (CANCELLED 2007/7/12 BY KAWADA)		2
K173		DFHR3H45ZA	HANDLE SHEET		2
K174		DFQT0048ZA	CENTRINO CORE2DUO LABEL	NRP	1
K175		DFQT9974ZA	WINDOWS XP LABEL(NOTE)	NRP	1
K176		DFQT0045ZA	ENERGY STAR LABEL	NRP	1
K201	⚠	DFGT1228ZA	INFORMATION LABEL(US)		1
K202		DFQT0055ZA	COA SERIAL LAMINATE		1
K211		DFBC0323ZA-0	POWER SW BUTTON		1

K212	DFGE0132ZB-0	CENTER COVER NET	2
K213	DFGX0493ZA-0	TILT PANEL	1
K214	DFHR3H21ZA	TILT PANEL SHEET	1
K215	DFHR3H77ZC	TILT PANEL WP SHEET	1
K216	DFHR3H78ZB	TILT PANEL WP SHEET B	1
K217	DFHR3H79ZB	TILT PANEL WP SHEET C	1
K218	DFHR3H99ZC	KBD TAPE	3
K221	DFWV99A0120	HDD MOUNTING KIT	1
K221-1	DFGX0492ZC-0	HDD CASE	1
K221-3	DFHM0431ZA	HDD CASE UPPER	1
K221-4	DFHR3F99YA	HDD DAMPER	1
K221-5	DFHR6203ZA	HOLDER HDD CN	1
K221-6	DFMX1305ZA	INSULATION SHEET HDD	1
K221-7	DFMX1330ZA	INSULATION SHEET	1
K221-8	DFWP0148ZA	HDD FPC ASSY	1
N1	DFHE5035ZB	SCREW	4
N2	DFHE5122YA	SCREW	40
N3	DRHM0065ZA	SCREW	1
N4	DRHM0093ZA	SCREW	38
N5	DRHM0112ZA	SCREW	2
N6	DRHM0115ZA	SCREW	2
N7	DRHM5025YAT	SCREW	10
N8	DRHM5054XAT	SCREW	5
N9	DRHM5104ZAT	SCREW	5
N10	DRSB2+3FKLT	SCREW	1
N11	DXQT2+F3FNLT	SCREW	3
N12	DXSB2+4FNLT	SCREW	10
N13	DXYN2+F12FNL	SCREW	4
N14	XTB26+10GJKT	SCREW	10
N15	XQN17+BJ6FJ	SCREW	2
N16	DRQT2+E8FKLT	SCREW	2
N202	DRSB2+4FKLT	SCREW	5
DVD Drive			
DM1 ⚠	DFWV78A0267	DVD MULTI DRIVE	1
DM1-1	DFHR9131ZA	BEZEL ASSY	1
DM2 ⚠	DFKE0709YA-0	MP BOTTOM	1
DM3 ⚠	DFKE0710ZA-0	MP CABINET TOP	1
DM4	DFHR6085ZA-0	MP LATCH	1
DM5	DFWP0142YA	MP FPC	1
DM6	DRHM5067YA	SCREW	2
DM7	DRQT2+E8FKLT	SCREW	2

Replacement Parts List

Note: Important Safety Notice
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components use only manufacturer's specified parts.

CF-52AJYZDZM

REF. NO and AREA		PART NO.	DESCRIPTION	Q'TY
MAIN PCB				
IC 1		C2GBD0000033	CPU	1
IC 2		C1CB00002803	CHIPSET PM	1
IC 4		C1CB00002746	CHIPSET	1
C 1, 2, 3, 5, 6, 7, 10, 11, 12, 14, 15, 16, 18, 19, 20, 22, 23, 24, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 44, 89, 106, 108, 112, 115, 121, 136, 138, 141, 143, 170, 172, 174, 176, 185, 187, 189, 191, 222, 226, 232, 234, 247, 251, 300, 302, 306, 308, 314, 315, 320, 329, 332, 340, 341, 342, 345, 347, 366, 370, 414, 425, 433, 449, 450, 451, 452, 453, 483, 492, 497, 515, 528, 531, 613, 614, 650, 652, 654, 656, 658, 660, 662, 664, 729, 730, 731, 1027, 1028, 1046, 1087, 1096, 1139		F1J0J106A016	CAPACITOR, 6.3V, 10µF	106
C 4, 91, 123, 134, 153, 233, 242		EEFCX0D221R	CAPACITOR, 2V, 220µF	7
C 8, 9, 13, 17, 21, 25, 46, 47, 48, 49, 50, 88, 90, 95, 98, 102, 109, 122, 124, 131, 147, 151, 154, 155, 156, 164, 165, 166, 167, 171, 173, 175, 177, 180, 181, 182, 183, 186, 188, 190, 192, 218, 219, 221, 223, 225, 229, 235, 237, 238, 239, 240, 241, 243, 244, 245, 248, 249, 259, 295, 296, 297, 298, 299, 313, 337, 343, 348, 361, 362, 364, 369, 372, 374, 375, 376, 377, 378, 395, 398, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 424, 426, 438, 440, 441, 442, 460, 461, 462, 463, 464, 474, 480, 481, 489, 490, 491, 495, 500, 509, 516, 517, 518, 519, 520, 521, 522, 553, 554, 555, 557, 559, 567, 568, 569, 580, 581, 582, 584, 601, 602, 603, 606, 607, 608, 609, 615, 624, 625, 626, 627, 628, 629, 630, 631, 642, 643, 644, 645, 646, 647, 648, 649, 651, 653, 655, 657, 659, 661, 663, 665, 725, 726, 727, 1098, 1156, 1157, 1158, 1172, 1220		F1G1C104A042	CAPACITOR, 16V, 0.1µF	172

C 41, 107, 110, 194, 195, 236, 312, 328, 334, 336, 339, 400, 416, 471, 473, 486, 487, 499, 546, 547, 560, 583		F1J0J4750019	CAPACITOR, 6.3V, 4.7µF	22
C 45, 421, 422, 423, 439, 488, 558, 588, 598, 600, 612, 732, 1041, 1043, 1048, 1082, 1085, 1089, 1134, 1141, 1216, 1219		F1G1H102A496	CAPACITOR, 50V, 1000pF	22
C 51, 52, 105, 132, 133, 162, 169, 178, 193, 200, 201, 202, 203, 224, 228, 246, 322, 323, 351, 355, 371, 373, 527, 618, 619, 620, 621, 636, 637, 638, 639, 672, 674, 675, 677		F1H0J1050022	CAPACITOR, 6.3V, 1µF	35
C 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 210, 211, 212, 213, 214, 215, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 458, 459, 470, 472, 475, 545, 564, 565, 566		F1G1A104A014	CAPACITOR, 10V, 0.1µF	79
C 85, 86, 87, 94, 126, 135		F1G0J474A001	CAPACITOR, 6.3V, 0.47µF	6
C 92, 93, 142, 146, 149, 152, 157, 158		F1G0J224A001	CAPACITOR, 6.3V, 0.22µF	8
C 96, 97, 111, 117, 118, 129, 137, 139, 217, 220, 227, 230, 231, 257, 261, 294, 301, 303, 304, 305, 307, 309, 310, 311, 316, 317, 318, 319, 321, 324, 325, 326, 327, 330, 331, 333, 335, 344, 352, 353, 354, 358, 359, 360, 363, 365, 367, 368, 454, 455, 456, 469, 498, 678, 679, 1007, 1015, 1016, 1093, 1161		F1G0J105A001	CAPACITOR, 6.3V, 1µF	60
C 113		D0GAR00J0005	RESISTOR, 1/16W, 0Ω	1
C 119, 120, 127, 128, 130, 150, 159, 250, 357, 533		F1J0J226A051	CAPACITOR, 6.3V, 22µF	10
C 196, 197, 198, 199, 216, 252, 253, 254, 255, 260, 417, 418, 419, 431, 432, 457, 466, 467, 476, 549, 550, 594, 610, 733, 734, 1025, 1026, 1090, 1150, 1151, 1154, 1155, 1165, 1167, 1206, 1207, 1209, 1215, 1218		F1G1E103A062	CAPACITOR, 25V, 0.01µF	39
C 204, 205, 393, 401, 1138		F1G1H220A542	CAPACITOR, 50V, 22pF	5
C 256, 258		F1G1H150A542	CAPACITOR, 50V, 15pF	2
C 338, 551, 552, 1086		F1G1H470A542	CAPACITOR, 50V, 47pF	4
C 356, 505, 506, 507, 510, 511, 512, 525, 526, 1014		F1G1H222A496	CAPACITOR, 50V, 2200pF	10
C 397, 445, 446, 447, 448, 622, 623, 640, 641, 1008, 1044, 1084		F1G1H471A496	CAPACITOR, 50V, 470pF	12
C 399, 427, 428, 429, 430, 482, 504, 575, 576, 1136		F1G1H221A496	CAPACITOR, 50V, 220pF	10
C 415		F1J1E334A081	CAPACITOR, 25V, 0.33µF	1

C 420, 1005		F1G1H271A495	CAPACITOR, 50V, 270pF	2
C 434, 435, 436, 437, 496, 503, 523, 524, 529, 530, 592, 616, 617, 632, 633, 634, 635, 1102, 1177		F1H1A1050015	CAPACITOR, 10V, 1µF	19
C 443, 444, 1132		F1G1H330A542	CAPACITOR, 50V, 33pF	3
C 465		F1L3D102A003	CAPACITOR, 2000V, 1000pF	1
C 468, 1045, 1083		F1G1H100A544	CAPACITOR, 50V, 10pF	3
C 477, 478, 479, 494		F1J2A103A018	CAPACITOR, 100V, 0.01µF	4
C 501, 502, 570, 571		EEFUD0J151ER	CAPACITOR, 6.3V, 150µF	4
C 508, 532, 1103, 1125, 1126, 1127		EEFCX0J101R	CAPACITOR, 6.3V, 100µF	6
C 596		F1G0J683A001	CAPACITOR, 6.3V, 0.068µF	1
C 1000, 1006, 1009, 1011, 1012		F1H1H1830001	CAPACITOR, 50V, 0.018µF	5
C 1002, 1042, 1143		F1G1H1010005	CAPACITOR, 50V, 100pF	3
C 1003		F1H1H562A748	CAPACITOR, 50V, 5600pF	1
C 1004		F1G1H121A495	CAPACITOR, 50V, 120pF	1
C 1010		F1G1H181A495	CAPACITOR, 50V, 180pF	1
C 1013		F1G1H390A542	CAPACITOR, 50V, 39pF	1
C 1017, 1018, 1038, 1079, 1130, 1140		F1H1C224A074	CAPACITOR, 16V, 0.22µF	6
C 1019, 1020, 1022, 1023, 1036, 1051, 1076, 1077, 1094, 1095, 1129, 1144, 1180, 1184, 1185, 1188, 1189, 1190, 1191, 1192, 1193, 1194		F1K1E1060001	CAPACITOR, 25V, 10µF	22
C 1029, 1031, 1032, 1034, 1035, 1099, 1100, 1196, 1204		EEFSX0D331ER	CAPACITOR, 2V, 330µF	9
C 1039, 1049, 1091		F1H1H182A748	CAPACITOR, 50V, 1800pF	3
C 1040, 1047, 1080, 1081, 1088, 1131, 1133, 1142, 1159, 1162, 1163, 1174, 1176, 1178, 1179, 1198		F1H1H104A748	CAPACITOR, 50V, 0.1µF	16
C 1052, 1075		EEFUD0D271ER	CAPACITOR, 2V, 270µF	2
C 1097		EEFCD0D101ER	CAPACITOR, 2V, 100µF	1
C 1137		F1G1H331A496	CAPACITOR, 50V, 330pF	1
C 1145		EEFCX0G151R	CAPACITOR, 2V, 150µF	1
C 1147, 1149		F1G1C473A004	CAPACITOR, 16V, 0.047µF	2
C 1166		F1L1E106A017	CAPACITOR, 25V, 10µF	1
C 1168		F1J1E105A009	CAPACITOR, 25V, 1µF	1
C 1175		F1G1H152A496	CAPACITOR, 50V, 1500pF	1
C 1181, 1182, 1183		DCUI1C106HDB	CAPACITOR, 16V, 10µF	3
CF 1, 2, 3		D4CC1103A038	THERMISTOR	3
CN 2		K1MML0B00005	CONNECTOR	1
CN 3		K1MML0B00006	CONNECTOR	1
CN 4		K1KA02AA0329	CONNECTOR	1
CN 5, 3000		K1KA30AA0184	CONNECTOR	2
CN 7		K1KA10AA0033	CONNECTOR	1
CN 9		K2HZ104B0014	CONNECTOR	1
CN 10		K1NAF0D00003	CONNECTOR	1
CN 13		K1MY52B00003	CONNECTOR	1
CN 14		K1KB30B00021	CONNECTOR	1
CN 15, 16, 29, 30		K1FY104BA024	CONNECTOR, USB	4
CN 18		K1KA03AA0329	CONNECTOR	1
CN 19, 27		K1KA40AA0330	CONNECTOR	2
CN 21		K1KY42B00001	CONNECTOR	1
CN 22		K1MY45AA0040	CONNECTOR	1
CN 23, 25		K1MY10AA0040	CONNECTOR	2
CN 28		K1FB115BA014	CONNECTOR	1
CN 31		K1KAA0AA0244	CONNECTOR	1
CN 33		K1KA62B00003	CONNECTOR	1
CN 34		K1MY14AA0040	CONNECTOR	1
CN 35		K1KA07AA0329	CONNECTOR	1
CN 36		K1KA08AA0266	CONNECTOR	1

CN 1000		K1KB40AA0217	CONNECTOR	1
D 2, 3, 10, 17, 18		MA2J72900L	DIODE	5
D 4, 7, 29, 1033, 1039,		MA3J741E0L	DIODE	6
D 8, 9, 22, 23, 30, 31, 33,		B0KB00000044	DIODE	8
D 19, 20, 21, 25, 26, 27, 28, 1030, 1031, 1032		B0ADDH000004	DIODE	10
D 24, 1027, 1029, 1042		MA2S111-TX	DIODE	4
D 1002, 1003, 1004, 1010		B0JCPD000023	DIODE	4
D 1005, 1009, 1015		B0JDAE000004	DIODE	3
D 1006, 1008, 1014, 1016, 1038		B0JCMD000014	DIODE	5
D 1019, 1020, 1021, 1022, 1023, 1024, 1026		MAZ80620ML	DIODE	7
D 1028		B2ABAM000002	DIODE	1
D 1034, 1037		B0JDSD000020	DIODE	2
D 1035		MAZ81200ML	DIODE	1
D 1036		MAZ81800ML	DIODE	1
F 2, 7, 8, 9, 10, 11	⚠	K5H202Z00005	FUSE, 2A, 32V	6
F 5	⚠	K5H402Z00003	FUSE, 4A, 32V	1
F 1000	⚠	K5H153A00001	FUSE, 15A, 65V	1
F 1001, 1002	⚠	K5H123Y00001	FUSE, 12A, 65V	2
FL 4, 5, 6, 7, 8, 9, 10, 11, 12, 13		J0HAAC000061	EMI FILTER	10
IC 3		C0JBBZ000319	PLL	1
IC 5		C0DBZYY00271	IC	1
IC 7		C0CBCBC00137	IC, REGULATOR	1
IC 12		C1CB00002734	TEMPERATURE SENSOR	1
IC 15		C0JBZZ000327	IC, THERMAL SENSOR	1
IC 17		C3EBDC000073	IC, EEPROM	1
IC 18		DA2205IDBLET	IC, LOGIC	1
IC 19, 66		C0JBAZ002422	IC, FET SWITCH	2
IC 23		C2CBJA000003	IC, MICON	1
IC 25, 32		C0DBZYY00026	IC, USB POWER SW	2
IC 26		C1DB00001379	IC, SUPER I/O	1
IC 27		C1CB00002790	IC, SECURITY CHIP	1
IC 28		C0ZBZ0000679	IC, RS232C TRANSCEIVER	1
IC 31, 33, 65		C0JBAR000500	IC, SWITCH	3
IC 34, 36, 1019, 1020		C0EBE0000459	IC	4
IC 38, 39		C0JBAZ002346	IC, LOGIC	2
IC 41		C0JBAZ002192	IC	1
IC 42, 49, 51, 53, 83, 84, 89, 90, 92, 1011, 1021,		C0JBAA000362	IC, LOGIC	12
IC 44		C1CB00002748	IC, VGA	1
IC 45		C1CB00002328	IC, CARD BUS CONTROLLER	1
IC 47		C0JBAB000624	IC	1
IC 52		C0JBAA000254	GATE LOGIC	1
IC 74		C0DBZYY00265	POWER MANAGEMENT SWTICH	1
IC 75, 76, 77, 78, 79, 80, 81, 82		C3ABSG000046	MEMORY	8
IC 85		C0JBAE000321	IC, LOGIC	1
IC 86		C1CB00002752	LAN CONTROLLER	1
IC 87		C0JBAZ002420	IC, LAN SW	1
IC 88		C0BBAA000034	CMOS COMPARATOR	1
IC 91		C0DBZYY00017	IC	1
IC 1000, 1001, 1003		C0DBALH00003	IC	3
IC 1004		C0DBAYY00281	DC/DC CONTROLLER FOR CPU	1
IC 1006		C0DBEFH00002	IC, REGULATOR	1
IC 1007		C0DBEZG00024	IC	1
IC 1008		C0EBE0000333	IC	1
IC 1009		C0ABZA000047	IC, AMP	1
IC 1010		C0DBDJH00009	IC, LINER	1
IC 1012, 1018		C0JBAD000195	IC	2
IC 1013		C0JBAZ002195	IC	1
IC 1014		C0ABBA000093	IC, OP AMP	1
IC 1022		C0EBA0000034	IC	1

JK 1000	⚠	K2EEYB000001	JACK	1
JK 8101, 8102		K1QZA1AE0001	CONNECTOR	2
L 1		G1C91NM00001	INDUCTOR	1
L 4		G1C1R0Z00002	INDUCTOR	1
L 5, 7, 8, 12, 17, 67, 68		J0JJC0000021	INDUCTOR	7
L 10, 13		G1C1R0MA0076	INDUCTOR	2
L 11		DDAZR100KTD	INDUCTOR	1
L 16, 64		J0JGC0000038	CHIP BEADS	2
L 20, 25, 26, 43, 44		J0JDC0000105	CHIP BEADS	5
L 22, 33, 34, 47, 48		J0JHC0000074	INDUCTOR	5
L 24		D0GAR00J0005	RESISTOR, 1/16W, 0Ω	1
L 28		G1BYYYY00009	INDUCTOR	1
L 31, 32, 41, 42, 76		J0MAB0000200	INDUCTOR	5
L 58		J0MAB0000116	INDUCTOR	1
L 61		J0JCC0000317	INDCUTOR	1
L 66		G1C4R7MA0077	INDUCTOR	1
L 71, 73, 74, 75		J0ZZB0000080	IDUCTOR, COMMON MODE FILTER	4
L 1000, 1001		G1AR56PA0001	INDUCTOR	2
L 1002, 1006		G1A1R2PA0001	CHOKE COIL	2
L 1003, 1005		G1C100M00030	COIL	2
L 1009		G1A4R7PA0001	CHOKE COIL	1
L 1010		G1C2R8MA0240	COIL	1
L 1011, 1012		J0JKC0000007	INDUCTOR	2
L 1013		G1A160HA0032	COIL	1
PA 4	⚠	D4FB1R100009	SWITCH	1
Q 1, 2, 42, 77, 79, 1010, 1014, 1019, 1022, 1037, 1040, 1045, 1092, 1111, 1112, 1119		B1CFGD000023	TRANSISTOR	16
Q 3, 28, 46, 74, 1009, 1016, 1025, 1046, 1047, 1076, 1077, 1078, 1079, 1082, 1087, 1091, 1099, 1100, 1101, 1102, 1114, 1118		B1GBCFJN0037	TRANSISTOR	22
Q 4, 16, 17, 18, 19, 20, 21, 23, 24, 25, 45, 52, 54, 65, 70, 72, 1043, 1044, 1075, 1088, 1113, 1117		B1GDCFNN0031	TRANSISTOR	22
Q 5, 29, 48, 59, 61		B1MBDCA00004	TRANSISTOR	5
Q 14, 38, 43, 47, 51		B1GFCFNN0019	TRANSISTOR	5
Q 26		B1DHDC000028	TRANSISTOR	1
Q 34, 35, 41, 60, 62, 66, 1036, 1055, 1060, 1062, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1072, 1080, 1081, 1083, 1086, 1090, 1122, 1123, 1124, 1125, 1126, 1127		B1GBCFNN0042	TRANSISTOR	29
Q 67		2SB0766ARL	TRANSISTOR	1
Q 73, 75, 1015, 1021, 1051, 1116, 1121		B1MBFDG00001	FET	7
Q 1001, 1003		B1CFRD000009	TRANSISTOR	2
Q 1004, 1005, 1006, 1007, 1012, 1024, 1038, 1096, 1097, 1110		B1CFRD000020	FET	10
Q 1008, 1054		B1DHDD000031	TRANSISTOR, FET	2
Q 1013, 1023, 1039, 1041, 1057, 1058, 1115		B1CFRD000014	FET	7
Q 1050, 1052, 1084, 1085, 1089, 1093		B1CHRD000001	TRANSISTOR	6
Q 1094		B1MBEDA00008	TRANSISTOR	1
R 1, 2, 27, 40, 42, 44, 193, 266, 267, 534, 579, 591, 592, 621		D0GA102JA023	RESISTOR, 1/16W, 1KΩ	14
R 3		D1H85104A024	RESISTOR ARRAY	1
R 7, 32, 74, 80, 82, 1026		D1BA1001A023	RESISTOR, 1/16W, 1KΩ	6
R 8, 33, 303		D1BA2001A023	RESISTOR, 1/16W, 2KΩ	3

R 10, 11, 31, 333, 334, 335, 336, 341, 342, 343, 344		D1BA1000A023	RESISTOR, 1/16W, 100Ω	11
R 14, 16		D1BA27R4A023	RESISTOR, 1/16W, 27.4Ω	2
R 15, 17, 36, 37		D1BA54R9A023	RESISTOR, 1/16W, 54.9Ω	4
R 19		D0GA680JA023	RESISTOR, 1/16W, 68Ω	1
R 20, 24, 25, 257, 305, 605, 606, 607, 608, 617, 618, 619, 620		D0GA560JA023	RESISTOR, 1/16W, 56Ω	13
R 21, 1027, 1029, 1053, 1101, 1161		D0GB100JA065	RESISTOR, 1/16W, 10Ω	6
R 22, 23, 175, 221, 256, 379, 419, 516, 526, 533, 574, 575, 576, 1192, 1193, 1194, 1195, 1196, 1197, 1200, 1206, 1207		D0GA101JA023	RESISTOR, 1/16W, 100Ω	22
R 26, 35, 99, 156, 212, 252		D1BA24R9A023	RESISTOR, 1/16W, 24.9Ω	6
R 29, 350, 1213, 1216, 1219, 1234		D0GA562JA023	RESISTOR, 1/16W, 5.6KΩ	6
R 30		D1BA2210A023	RESISTOR, 1/16W, 221Ω	1
R 34, 46, 60, 61, 62, 68, 69, 72, 73, 84, 85, 88, 90, 91, 94, 95, 96, 135, 137, 139, 142, 144, 145, 146, 148, 149, 150, 151, 167, 178, 224, 251, 258, 312, 317, 355, 358, 370, 390, 391, 420, 431, 432, 436, 504, 505, 508, 547, 555, 557, 558, 645, 1001, 1003, 1018, 1054, 1113, 1204, 1225		D0GAR00J0005	RESISTOR, 1/16W, 0Ω	59
R 49, 50, 359, 364, 449, 694, 1038, 1039, 1056, 1121, 1122, 1169, 1208		D1BA1002A022	RESISTOR, 1/16W, 10KΩ	13
R 58, 244, 1080, 1106, 1166		D0GA203JA023	RESISTOR, 1/16W, 20KΩ	5
R 70, 71		D1BA20R0A023	RESISTOR, 1/16W, 20Ω	2
R 75		D1BA3920A023	RESISTOR, 1/16W, 392Ω	1
R 81, 1024, 1246, 1247		D1BA3001A022	RESISTOR, 1/16W, 3KΩ	4
R 97, 98		D0GA222JA023	RESISTOR, 1/16W, 2.2KΩ	2
R 138, 143, 147, 233, 234, 239		D0GB1R0JA065	RESISTOR, 1/16W, 1Ω	6
R 140, 165, 246, 459, 520, 695, 696, 697, 1176, 1181, 1183, 1188, 1189, 1285, 1286, 1287, 1288, 1289, 1290		D0GA105JA023	RESISTOR, 1/16W, 1MΩ	19
R 153, 247, 311, 325, 337, 346, 360, 362, 363, 388, 413, 416, 417, 461, 463, 511, 517, 525, 548, 552, 578, 646, 1005, 1047, 1064, 1114, 1175, 1223, 1226, 1229, 1263, 1264, 1293, 1294		D0GA104JA023	RESISTOR, 1/16W, 100KΩ	34
R 154, 171, 176, 211, 219, 236, 237, 238, 259, 309, 319, 322, 323, 332, 347, 361, 414, 415, 427, 428, 440, 441, 462, 486, 487, 490, 492, 496, 500, 510, 518, 523, 524, 529, 538, 539, 572, 573, 581, 583, 584, 590, 593, 644, 1008, 1044, 1048, 1052, 1100, 1108, 1160, 1203, 1222, 1230, 1279, 1291, 1292		D0GA103JA023	RESISTOR, 1/16W, 10KΩ	57
R 157, 158, 160, 161, 162, 164		D1HA5608A010	RESISTOR, 1/16W, 56Ω	6

R 159, 163, 366		D1H85604A024	RESISTOR ARRAY	3
R 168, 169, 206, 207		D0GA150JA023	RESISTOR, 1/16W, 15Ω	4
R 173, 187, 188, 203, 205, 222, 264, 375, 423, 439, 473, 587, 589		D1H81034A024	RESISTOR ARRAY	13
R 174, 457		D1H83304A024	RESISTOR ARRAY	2
R 180, 183, 184, 202, 265, 351, 352, 353, 354, 376, 385, 411, 429, 430, 437, 452, 453, 478, 488, 521, 522, 535, 567, 568		D0GA330JA023	RESISTOR, 1/16W, 33Ω	24
R 201, 225		D1H84724A024	RESISTOR ARRAY	2
R 204, 261, 262, 263, 425, 438, 477		D1HA1038A010	RESISTOR, 1/16W, 10KΩ	7
R 213		D1BA22R6A023	RESISTOR, 1/16W, 22.6Ω	1
R 226, 450, 464		D0GA471JA023	RESISTOR, 1/16W, 470Ω	3
R 228, 230		D1BA3241A023	RESISTOR, 1/16W, 3.24KΩ	2
R 229, 231		D1BA4530A023	RESISTOR, 1/16W, 453Ω	2
R 232		D0GA121JA023	RESISTOR, 1/16W, 120Ω	1
R 235, 559, 586, 596, 681, 682, 683, 687		D1H8R0040009	JUMPER	8
R 240, 242		D1BA3323A023	RESISTOR, 1/16W, 332KΩ	2
R 245		D0GA106JA023	RESISTOR, 1/16W, 10MΩ	1
R 254		D0GA334JA023	RESISTOR, 1/16W, 330KΩ	1
R 260, 313, 314, 338, 339, 551, 553, 561, 562, 1179, 1184, 1245		D0GA472JA023	RESISTOR, 1/16W, 4.7KΩ	12
R 268		D1BA1210A023	RESISTOR, 1/16W, 121Ω	1
R 269		D1BA71R5A023	RESISTOR, 1/16W, 71.5Ω	1
R 302		D1BA5620A023	RESISTOR, 1/16W, 562Ω	1
R 304		D1BA1471A023	RESISTOR, 1/16W, 1.47KΩ	1
R 306		D1BA7150A023	RESISTOR, 1/16W, 715Ω	1
R 315, 699, 1014, 1032, 1033, 1034, 1035		D0GBR00J0004	RESISTOR, 1/16W, 0Ω	7
R 340		D1BA2430A023	RESISTOR, 1/16W, 243Ω	1
R 367		D1BA5101A023	RESISTOR, 1/16W, 5.1KΩ	1
R 373, 374, 1049, 1050, 1061, 1062, 1097, 1098, 1111, 1112, 1157, 1158, 1170, 1171		D0GA100JA023	RESISTOR, 1/16W, 10Ω	14
R 400, 401, 402, 403, 404, 405, 406, 407		D1BA49R9A023	RESISTOR, 1/16W, 49.9Ω	8
R 409		D1BA1401A023	RESISTOR, 1/16W, 1.4KΩ	1
R 410, 1036, 1037		D1BA1501A023	RESISTOR, 1/16W, 1.5KΩ	3
R 412, 512, 1156, 1180, 1182, 1228, 1232		D0GA474JA023	RESISTOR, 1/16W, 470KΩ	7
R 421, 422, 541, 569		D1BA75R0A023	RESISTOR, 1/16W, 75.0Ω	4
R 424, 426		D1BA3901A023	RESISTOR, 1/16W, 3.9KΩ	2
R 458		D0GA181JA023	RESISTOR, 1/16W, 180Ω	1
R 465, 466, 467, 469, 536, 537, 542, 543, 1115		D0GA221JA023	RESISTOR, 1/16W, 220Ω	9
R 475		D1HA1028A010	RESISTOR, 1/16W, 1KΩ	1
R 480, 482, 519, 1010, 1155, 1221, 1227, 1256		D0GA473JA023	RESISTOR, 1/16W, 47KΩ	8
R 506, 507		D1HA4728A010	RESISTOR, 1/16W, 4.7KΩ	2
R 544, 594		D1H84734A024	RESISTOR ARRAY	2
R 546, 550		D0GA682JA023	RESISTOR, 1/16W, 6.8KΩ	2
R 564, 565, 566, 628, 629, 630		D1BA1500A023	RESISTOR, 1/16W, 150Ω	6
R 570		D1BA1871A023	RESISTOR, 1/16W, 1.87Ω	1
R 571, 1162, 1214, 1218		D1BA1003A022	RESISTOR, 1/16W, 100KΩ	4
R 597, 598, 599, 600, 601, 602, 603, 604, 609, 610, 611, 612, 613, 614, 615, 616		D1BA4991A023	RESISTOR, 1/16W, 4.99KΩ	16
R 623, 624, 625		D1BA4990A023	RESISTOR, 1/16W, 499Ω	3
R 648		D0GA152JA023	RESISTOR, 1/16W, 1.5KΩ	1
R 1006		D1BA6801A023	RESISTOR, 1/16W, 6.8KΩ	1
R 1007, 1082, 1233		D1BA3652A022	RESISTOR, 1/16W, 36.5KΩ	3

R 1011		D1BA3093A023	RESISTOR, 1/16W, 309KΩ	1
R 1012		D1BA1052A023	RESISTOR, 1/16W, 10.5KΩ	1
R 1013		D1BA2151A023	RESISTOR, 1/16W, 2.15KΩ	1
R 1015		D1BA2000A023	RESISTOR, 1/16W, 200Ω	1
R 1016		D1BA2550A023	RESISTOR, 1/16W, 255Ω	1
R 1021		D1BA1821A023	RESISTOR, 1/16W, 1.82KΩ	1
R 1028		D0GB101JA065	RESISTOR, 1/16W, 100Ω	1
R 1030, 1031, 1220		D0GB3R3JA065	RESISTOR, 1/16W, 3.3Ω	3
R 1040, 1041		D1JB1M00A001	RESISTOR, 1W, 1mΩ	2
R 1042, 1043		D1BA10R0A023	RESISTOR, 1/16W, 10Ω	2
R 1045, 1116, 1117, 1118, 1119, 1120, 1149, 1153, 1154, 1172, 1173, 1250, 1251, 1282, 1283, 1284		D1BDR0220001	RESISTOR, 1/8W, 0.022Ω	16
R 1051, 1057, 1099, 1159		D0GA153JA023	RESISTOR, 1/16W, 15KΩ	4
R 1055		D1BA3161A023	RESISTOR, 1/16W, 3.16KΩ	1
R 1058, 1105, 1165		D0GA333JA023	RESISTOR, 1/16W, 33KΩ	3
R 1059		D1BA8201A023	RESISTOR, 1/16W, 8.2KΩ	1
R 1060, 1109, 1209		D1BA1502A022	RESISTOR, 1/16W, 15KΩ	3
R 1063		D1BA2400A023	RESISTOR, 1/16W, 240Ω	1
R 1065, 1066, 1067		D1BDR0470002	RESISTOR, 1/8W, 0.047Ω	3
R 1094, 1095, 1174, 1252, 1253		D1BDR0330001	RESISTOR, 1/8W, 0.033Ω	5
R 1103		D1BA1602A022	RESISTOR, 1/16W, 16KΩ	1
R 1104		D1BA1802A023	RESISTOR, 1/16W, 18KΩ	1
R 1110		D1BA1202A023	RESISTOR, 1/16W, 12KΩ	1
R 1150, 1151		D1BA5601A023	RESISTOR, 1/16W, 5.6KΩ	2
R 1152		D1BA1302A023	RESISTOR, 1/16W, 13KΩ	1
R 1163		D1BA6201A022	RESISTOR, 1/16W, 6.2KΩ	1
R 1164		D1BA2002A022	RESISTOR, 1/16W, 20KΩ	1
R 1167		D1BA1301A022	RESISTOR, 1/16W, 1.3KΩ	1
R 1168		D1BA3002A022	RESISTOR, 1/16W, 30KΩ	1
R 1177, 1185, 1224		D0GA564JA023	RESISTOR, 1/16W, 560KΩ	3
R 1199		D0GA223JA023	RESISTOR, 1/16W, 22KΩ	1
R 1201, 1202		D0GD222JA052	RESISTOR, 1/8W, 2.2KΩ	2
R 1205		D1ZZ00000046	RESISTOR, 1W, 5mΩ	1
R 1212		D1BDR4700001	RESISTOR, 1/8W, 0.47Ω	1
R 1215, 1217		D1BB1503A074	RESISTOR, 1/16W, 150KΩ	2
R 1231		D1BA1103A022	RESISTOR, 1/16W, 110KΩ	1
R 1235		D1BA1503A023	RESISTOR, 1/16W, 150KΩ	1
R 1236, 1237, 1238, 1239, 1240, 1241		D1BDR1000002	RESISTOR, 1/8W, 0.1Ω	6
R 1243		D1BB1623A075	RESISTOR, 1/16W, 162KΩ	1
R 1244		D1BB1692A075	RESISTOR, 1/16W, 16.9KΩ	1
R 1248, 1249		D1BDR0680001	RESISTOR, 1/8W, 0.068Ω	2
R 1265, 1266		D0GD122JA052	RESISTOR, 1/16W, 1.2KΩ	2
T 1, 2		G5BYC0000015	TRANCE	2
X 1		H0J143500042	OSCILLATOR, 14.375MHz	1
X 2		H0J327200150	OSCILLATOR, 32.768KHz	1
X 5		H2D800400015	OSCILLATOR, 8MHz	1
X 7		H0J245500046	OSCILLATOR, 24.576MHz	1
X 8		H0J250500027	OSCILLATOR, 25MHz	1
ZA 3, 4, 5, 6, 1001, 1002		K1YGZZ000068	STUD	6
0		D0GAR00J0005	RESISTOR, 1/16W, 0Ω	2
AUDIO PCB				
C 3003, 3014, 3015, 3028, 3035, 3050, 3051		F1G1A104A014	CAPACITOR, 10V, 0.1µF	7
C 3004, 3042, 3044		F1G0J105A001	CAPACITOR, 6.3V, 1µF	3
C 3005, 3006, 3043		F1G1H102A496	CAPACITOR, 50V, 1000pF	3
C 3007, 3008, 3019, 3020		F1L0J107A016	CAPACITOR, 6.3V, 100µF	4
C 3009, 3017, 3041		F1H1A1050015	CAPACITOR, 10V, 1µF	3
C 3010, 3033, 3052		F1J0J106A016	CAPACITOR, 6.3V, 10µF	3
C 3016, 3027		F1G0J224A001	CAPACITOR, 6.3V, 0.22µF	2
C 3023, 3024, 3025		F1J0J4750019	CAPACITOR, 6.3V, 4.7µF	3
C 3031, 3032		F1G0J334A001	CAPACITOR, 6.3V, 0.33µF	2

C 3036		F1G1C104A042	CAPACITOR, 16V, 0.1µF	1
C 3037, 3038		F1G1H1010005	CAPACITOR, 50V, 100pF	2
C 3039, 3040		F1H1A225A039	CAPACITOR, 10V, 2.2µF	2
C 3047		ECUV1H103ZFG	INDUCTOR	1
D 3001, 3002		B3ACB0000020	DIODE	2
D 3046		B0JCMD000014	DIODE	1
IC 3052		C1CB00002733	AUDIO CODEC	1
IC 3053		C1AB00002507	IC, AUDIO POWER AMPLIFIER	1
IC 3054		C0CBCBC00181	IC	1
JK 3003, 3004		K2HC1YYB0040	AUDIO JACK	2
L 3043, 3044, 3045, 3046, 3047, 3048, 3049		DDB5Z021D-Y	CHIP BEADS	7
Q 3014		B1GFCFNN0019	TRANSISTOR	1
R 3001, 3003		D0GA203JA023	RESISTOR, 1/16W, 20KΩ	2
R 3002, 3036, 3039, 3041, 3049		D0GAR00J0005	RESISTOR, 1/16W, 0Ω	5
R 3006		D0GDR00J0004	RESISTOR, 1/8W, 0Ω	1
R 3009, 3011		D0GA562JA023	RESISTOR, 1/16W, 5.6KΩ	2
R 3010, 3012		D0GA103JA023	RESISTOR, 1/16W, 10KΩ	2
R 3014		D0GA333JA023	RESISTOR, 1/16W, 33KΩ	1
R 3015, 3017		D0GA153JA023	RESISTOR, 1/16W, 15KΩ	2
R 3016, 3018		D0GA243JA023	RESISTOR, 1/16W, 24KΩ	2
R 3019		D0GA473JA023	RESISTOR, 1/16W, 47KΩ	1
R 3021, 3022		D1BA30R1A023	RESISTOR, 1/16W, 30.1Ω	2
R 3023		D0GA1R0JA023	RESISTOR, 1/16W, 1.0Ω	1
R 3024, 3043		D1BA2671A023	RESISTOR, 1/16W, 2.67KΩ	2
R 3025		D0GA330JA023	RESISTOR, 1/16W, 33Ω	1
R 3027, 3061, 3062		D0GA101JA023	RESISTOR, 1/16W, 100Ω	3
R 3028		D1BA2002A023	RESISTOR, 1/16W, 20KΩ	1
R 3030, 3031		D0GA392JA023	RESISTOR, 1/16W, 3.9KΩ	2
R 3032, 3033		D0GA4R7JA023	RESISTOR, 1/16W, 453Ω	2
R 3035		D0GA273JA023	RESISTOR, 1/16W, 273Ω	1
R 3042		D0GA100JA023	RESISTOR, 1/16W, 10Ω	1
R 3045		D1BA3922A023	RESISTOR, 1/16W, 39.2KΩ	1
R 3052, 3055		D0GBR00J0004	RESISTOR, 1/16W, 0Ω	2
SW 3001		K0D112B00071	SW	1
SERIAL PCB				
CN 4000		K1KA10AA0033	CONNECTOR	1
CN 4001		K1FA209BA004	CONNECTOR	1
TOUCH PAD PCB				
C 4101		F1H0J1050022	CAPACITOR, 6.3V, 1µF	1
CN 4100		K1MY10BA0101	CONNECTOR	1
CN 4101		K1MY12BA0101	CONNECTOR	1
SW 4102, 4103		EVQPLDA15	SWITCH	2
SW LEDPCB				
C 4200		F1J0J4750019	CAPACITOR, 6.3V, 4.7µF	1
C 4201		F1G1C104A042	CAPACITOR, 16V, 0.1µF	1
C 4202, 4203, 4204, 4205		F1G1H222A496	CAPACITOR, 50V, 2200pF	4
CN 4200		K1KA30BA0060	CONNECTOR	1
CN 4201		K1KY12A00005	CONNECTOR	1
CN 4202, 4203		K1KA02BA0014	CONNECTOR	2
D 4200, 4201, 4202, 4204, 4205		B3ABB0000210	DIODE	5
D 4203		B3AGB0000040	DIODE	1
R 4200		D0GA330JA023	RESISTOR, 1/16W, 33Ω	1
SW 4200		EVQPLDA15	SWITCH	1
ZA 4201, 4202		K1YGZZ000068	STUD	2
SD PCB				
C 4302		F1H1A1050015	CAPACITOR, 10V, 1µF	1
C 4303		F1G1H330A542	CAPACITOR, 50V, 33pF	1
C 4304		F1G1E103A062	CAPACITOR, 25V, 0.01µF	1
CN 4300		K1MY15BA0101	CONNECTOR	1
CN 4301		K1NA09E00073	CONNECTOR	1
D 4301		B3ACB0000020	DIODE	1

Q 4300		UNR9113J0L	TRANSISTOR	1
R 4300		D0GD101JA052	RESISTOR, 1/8W, 100Ω	1
R 4301		D0GA101JA023	RESISTOR, 1/16W, 100Ω	1
SW 4301		K0ZZ00000619	SW	1
PWR BATTERY LED PCB				
CN 4400		K1KA05BA0014	CONNECTOR	1
D 4401		B3ABB0000210	DIODE	1
D 4402		B3AGB0000040	DIODE	1
SC RELAY PCB				
CN 6502		K1KA10BA0162	CONNECTOR	1
CN 6503		K1MY10BA0101	CONNECTOR	1
C 7000, 7004, 7008, 7012,		F1G1C104A042	CAPACITOR, 16V, 0.1µF	5
C 7002		F1G1H221A495	CAPACITOR, 50V, 220pF	1
C 7006, 7007, 7009		F1J0J106A016	CAPACITOR, 6.3V, 10µF	3
C 7010, 7011		EEFCX0G151R	CAPACITOR, 2V, 150µF	2
C 7014		F1G1H1010005	CAPACITOR, 50V, 100pF	1
CN 7000		K1MY52BA0190	CONNECTOR	1
CN 7001		K1NA08E00007	CONNECTOR	1
CN 7002		K1MY14BA0101	CONNECTOR	1
D 7003		DEDRB081L20	DIODE	1
IC 7000		C0DBAYY00204	IC, DC/DC CONVERTER	1
JK 7001, 7002, 7003, 7004, 7005, 7006		K1QZA1AE0001	CONNECTOR	6
L 7000		G1C2R7MA0273	INDUCTOR, COIL	1
Q 7000		B1GBCFNN0042	TRANSISTOR	1
Q 7001		B1CFGD000023	TRANSISTOR	1
Q 7002		B1GDCFNN0031	TRANSISTOR	1
Q 7003		B1CHRD000001	TRANSISTOR	1
R 7000, 7002		D0GA103JA023	RESISTOR, 1/16W, 10KΩ	2
R 7001		D1BA1002A023	RESISTOR, 1/16W, 10KΩ	1
R 7003		D1BB3002A074	RESISTOR, 1/10W, 30KΩ	1
R 7004		D1BA1001A023	RESISTOR, 1/16W, 1KΩ	1
R 7005		D1BDR0470002	RESISTOR, 1/8W, 0.047Ω	1
R 7006		D1BDR0330001	RESISTOR, 1/8W, 0.033Ω	1
R 7008, 7013		D0GAR00J0005	RESISTOR, 1/16W, 0Ω	2
R 7011, 7012		D0GA101JA023	RESISTOR, 1/16W, 100Ω	2
SW 7000		K0D211A00015	DIP SWITCH	1
ZA 7001, 7002		K1YGZZ000060	SPACER	2
WWAN PCB				
WLAN DUMMY PCB				
JK 8001, 8002		K1QZA1AE0001	CONNECTOR	2
WWAN DUMMY PCB				
BIOS PCB				
C 9003		F1G1C104A042	CAPACITOR, 16V, 0.1µF	1
C 9025		F1J0J106A016	CAPACITOR, 6.3V, 10µF	1
CN 9000		K1KA30A00119	CONNECTOR	1
IC 9001		C3FBLY000041	FLASH MEMORY	1
R 9004, 9020		D0GA103JA023	RESISTOR, 1/16W, 10KΩ	2
R 9022		D1H83304A024	RESISTOR ARRAY	1
BT PCB				
C 5000		F1J0J1060004	CAPACITOR, 6.3V, 10µF	1
C 5001, 5006, 5009		F1G1C104A042	CAPACITOR, 16V, 0.1µF	3
C 5002, 5004		F1G1H102A496	CAPACITOR, 50V, 1000pF	2
C 5005, 5008		F1G1E103A062	CAPACITOR, 25V, 0.01µF	2
C 5007		F1G1H220A542	CAPACITOR, 50V, 22pF	1
C 5010		F1G1HR50A543	CAPACITOR, 50V, 0.5pF	1
CN 5000		K1KA10BA0014	CONNECTOR	1
IC 5000, 5003		C0JBAZ002422	IC, FET SWITCH	2
IC 5001		N5HZZ0000056	BLUETOOTH MODULE	1
IC 5002		C0EBE0000460	IC	1
L 5000		J0JHC0000074	INDUCTOR	1

L 5001		J0JJC0000021	INDUCTOR	1
L 5003		G1C6N8JA0024	CHIP INDUCTOR	1
Q 5000		B1GBCFNN0042	TRANSISTOR	1
Q 5001		B1DHDC000028	TRANSISTOR	1
R 5000, 5001		D0GA104JA023	RESISTOR, 1/16W, 100KΩ	2
R 5002		D0GAR00J0005	RESISTOR, 1/16W, 0Ω	1